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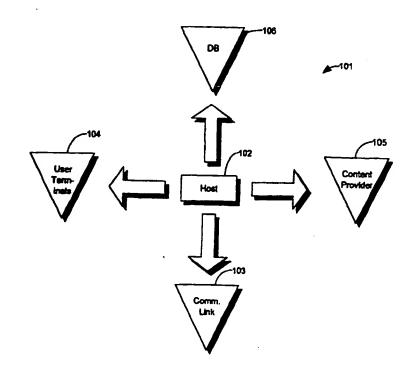
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(54) Title: INTEGRATED FINANCIAL INVESTMENT SERVICES INFORMATION SYSTEM

(57) Abstract

A financial services information processing system (101) for use between a broker end user (104) and a content provider (105) on an interactive communication network (124) is provided. Data is communicated between the user (104) and the content provider (105) via the interactive communication network (124). The data includes an electronic application form (216) generated from financial instrument application data such as a mutual fund. Subsequently, the graphical user interface elements including the electronic application form (216) are displayed. Client application data is received as input by the user. This client application data is sent to the content provider (105). A notification is received from the content provider (105) when further information or correction is needed based on a comparison of the client application data to financial instrument application reference data. In addition, a financial services information system (101) which implements the method in a user apparatus alone and in a system having a content provider (105) and a host (102) is provided.



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INTEGRATED FINANCIAL INVESTMENT SERVICES INFORMATION SYSTEM

Field Of The Invention

The present invention relates generally to financial services and, more particularly, to a broad-based financial services information system for integrating investment information and transactions, news, continuing education information and services, office systems, an electronic mail system having world-wide transmission capabilities, and other related financial services.

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Background of the Invention

Financial industry institutions, particularly brokerage houses, historically have used automated systems to process transactions in investment vehicles such as stocks, bonds, equities, and options. Other securities such as mutual funds and annuities, however, generally have not been automated and continue to be processed using traditional paper and mail systems. The automated systems, however, are fragmented, being separately supported and separately accessible to brokers or other users. Thus, brokers must have access to a variety of systems and even then, the available automated systems do not include all investment vehicles.

Institutions such as brokerage houses commonly have access to electronic, interoffice mail systems (e-mail systems) for communication between brokers. More recently, many brokers have gained access to public data networks, such as the Internet, providing electronic communication between brokers and outside entities. Generally, however, interoffice e-mail systems and the Internet are separate and apart from any automated investment systems to which the brokers have access. Thus, brokers must exit any investment system applications to access the interoffice e-mail system or the Internet. Because the interoffice e-mail systems are not integrated with automated financial tools, automatic electronic notifications, reminders, confirmations, and the like responding to transactions or requests by the brokers through the available automated financial systems, are not provided through the interoffice e-mail systems or the Internet.

Office systems are also usually available in brokerage houses, having tools such as, for example, word processors, spreadsheet packages, electronic address books and calculators. Again, however, the office systems generally are separate and apart from any available automated investment systems. Even with windows-based applications, the separate systems prevent efficiency and productivity that could be gained through integration.

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In addition to automated investment systems, e-mail systems, the Internet, and office systems, persons working for financial institutions, such as brokers and financial planners, need many other reference materials and information in order to effectively perform their jobs. For example, continuing education is often mandated by state law. Information concerning seminars and other approved education courses is generally disseminated to such institutions using traditional postal services and word of mouth. Brokers and financial planners also need access to newspapers and certain periodicals to keep apprised of business and financial news as well as other news that may impact financial markets or that may be important to clients. In addition, brokers and financial planners are increasingly providing other financial services. Some of these other financial services may include: money market accounts, savings accounts, credit card accounts, mortgage accounts, and trusts. Finally, many insurance brokers are also offering investment services including stocks and bonds, mutual funds, and annuities to their clients. No system currently exists, however, that integrates insurance products with other investment vehicles.

While brokers currently have many automated systems for conducting different business transactions and communications, the systems are fragmented and exist separately and independently of each other. Brokers need access to a wide range of information and transaction capabilities in order to effectively provide services to their clients. A system is needed wherein all of the components needed by brokers to effectively conduct their business are integrated into a single computer-assisted financial services information system.

Summary of the Invention

The present invention solves these problems by providing a system and method integrating many different components of financial services such as transaction services, general information, and trading prices for stocks, options, bonds, mutual funds and annuities, newspapers and periodicals, insurance information and processing capabilities, other financial services such as money markets, credit card accounts, savings accounts, mortgages and trusts, continuing education information and services, registration and licensing, other financial planning services, reference materials, tax and legal services, and other related services. In the present invention, these components are provided by various content providers having products and/or expertise about the particular component. In addition, the present invention provides world-wide electronic mail communication and other office packages including a word processor, an appointment calendar, an address book, a to do list, a calculator, a client data list, and a spreadsheet, all

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integrated with and accessible from the other information and transaction processing available to brokers on the system.

In accordance with one embodiment of the invention, a broker information processing method for use between a broker end user and a content provider on an interactive communication network is provided. Data is communicated between the broker end user and the content provider via the interactive communication network. The data includes an electronic application form generated from financial instrument application data such as a mutual fund. Subsequently, the graphical user interface elements including the electronic application form are displayed. Client application data is received as input by the broker end user on the electronic application form. This client application data is sent to the content provider. A notification is received from the content provider when further information or correction is needed based on a comparison of the client application data to financial instrument application reference data. As a result, the client application data is checked prior to submission to the content provider.

Another embodiment is a broker information system which implements the method in a end user apparatus which interacts with content provider through a host operatively coupled to the interactive communication network.

These and various other features as well as advantages which characterize the present invention will be apparent upon reading of the following detailed description and review of the associated drawings.

Brief Description of the Drawings

- FIG. 1 is a block diagram of a computer-assisted financial services information system according to one embodiment of the present invention.
 - FIG. 2 is a block diagram of a personal computer system.
- FIG. 3 is a more detailed block diagram of the computer-assisted financial services information system of FIG. 1 showing components of the system attached to a host via individual communication networks.
- FIG. 4 (including Figs. 4-1 through 4-2) is a flow chart representing a main entry screen and a main menu of a menu-driven financial services information system in accordance with one embodiment of the present invention.
- FIG. 5 is a flow chart representing a menu structure of the news section of the financial services information system of FIG. 4.
- FIG. 6 is a flow chart representing a menu structure of the electronic office system of the financial services information system of FIG. 4.
 - FIG. 7 is a flow chart representing a menu structure of the securities section of the financial services information system of FIG. 4.

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- FIG. 8 is a flow chart representing a menu structure of the mutual funds section of the financial services information system of FIG. 4.
- FIG. 9 (including Figs. 9-1 through 9-2) is a flow chart representing a menu structure of the annuities section of the financial services information system of FIG.
- FIG. 10 is a flow chart representing a menu structure of the insurance section of the financial services information system of FIG. 4.
- FIG. 11 is a flow chart representing a menu structure of the other financial services information section of the financial services information system of FIG. 4.
- FIG. 12 is a flow chart representing a menu structure of the education section of the financial services information system of FIG. 4.
- FIG. 13 is a flow chart representing a menu structure of the reference section of the financial services information system of FIG. 4.
- FIG. 14 is a flow chart representing a menu structure of the dynamic advertising section of the financial services information system of FIG. 4.
- FIG. 15 is a diagram representing a video screen display of the main entry screen represented in FIG. 4.
- FIG. 16 is a diagram representing a video screen display of the main menu screen represented in FIG. 4.
- FIG. 17 is a diagram representing a video screen display of the office system menu represented in FIG. 6.
- FIG. 18 (including Figs. 18-1 through 18-2) is a diagram representing a video screen display of the electronic mail system of FIGS. 4 and 6.
- FIG. 19 is a diagram representing a video screen display of the calendar of FIG. 6 and showing an exemplary calendar entry.
- FIGS. 20 and 21 are diagrams representing video screen displays of detailed information about the exemplary calendar entry on the calendar shown in FIG. 19.
- FIG. 22 is a diagram representing a video screen display of the address book of FIG. 6 and showing exemplary addresses.
- FIG. 23 is a diagram representing a video screen display of detailed information pertinent to one of the exemplary addresses shown in FIG. 22, and certain options with regard to the one exemplary address.
- FIG. 24 is a diagram representing a video screen display of the to do list option of FIG. 6 and showing exemplary action items.
- FIG. 25 is a diagram representing a video screen display of the word processor option of FIG. 6.
 - FIG. 26 is a diagram representing a possible video screen display of the spreadsheet option of FIG. 6.

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- FIG. 27 is a diagram representing a possible video screen display of the calculator option of FIG. 6.
- FIG. 28 (including Figs. 28-1 through 28-2) is a diagram representing a video screen display of the customer information list option of FIG. 6.
- FIG. 29 is a diagram representing a video screen display of the news section menu represented in FIG. 5.
- FIGS. 30 through 32 are diagrams representing video screen displays of the securities section menus represented in FIG. 7.
- FIGS. 33 through 40 (Fig. 39 including Figs. 39-1 through 39-3) are diagrams representing video screen displays of the mutual funds section menus represented in FIG. 8.
 - FIGS. 41 through 49 (Fig. 47 including Figs. 47-1 through 47-3; Fig. 49 including Figs. 49-1 through 49-6) are diagrams representing video screen displays of the annuities section menus represented in FIG. 9.
 - FIGS. 50 through 52 are diagrams representing video screen displays of the insurance section menus represented in FIG. 10.
 - FIG. 53 is a diagram representing a video screen display of the other financial services section menu represented in FIG. 11.
- FIGS. **54** and **55** (Fig. 55 including Figs. 55-1 through 55-2) are diagrams representing video screen displays of the education section menus represented in FIG. **12**.
 - FIG. 56 is a diagram representing a video screen display of the reference section menu represented by FIG. 13.
- FIG. 57 is a flowchart of a preferred embodiment transaction process for a

 25 financial instrument used in the interactive computer and communications network shown in FIG. 3.
 - FIG. 58 is a flowchart of a preferred embodiment information supplying method for financial services used in the interactive computer and communications network shown in FIG. 3.
- FIG. 59 is a flowchart of a preferred embodiment electronic mail and continuing education services method for financial services used in the interactive computer and communications network shown in FIG. 3.
 - FIG. 60 is a flowchart of a preferred embodiment electronic office method for financial services used in the interactive computer and communications network shown in FIG. 3.
 - FIG. 61 is a diagram representing a video screen display of a help system to provide instructional information for annuities applications.

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FIG. 62 (including Figs. 62-1 through 62-2) is a diagram representing a video screen display of a help system providing specific instructional information in response to a selected subject area.

FIG. 63 is a diagram representing a video screen display of a selected mutual fund prospectus.

Detailed Description

Referring to the several figures in which like elements are identically numbered throughout, preferred embodiments of the present invention will now be described.

Shown in FIG. 1, is a general diagram of the components of a preferred embodiment menu-driven financial services information system 101. The central components of a preferred embodiment of the financial services information system 101 include a host 102 having at least one database 106, and being operatively connected to at least one content provider 105, a world-wide communication link 103, and at least one broker end user terminal 104.

The preferred embodiments of the present invention are preferably practiced with the user terminal 104 being a personal computer, or work station, such as the IBM®, PS/2® or Apple® Macintosh® computer. A representative hardware environment is depicted in FIG. 2, which illustrates a typical hardware configuration of a work station in accordance with the preferred embodiments, having a central processing unit 107, such as a microprocessor, and a number of other units interconnected via a system bus 108. The work station shown in FIG. 2 includes a Random Access Memory (RAM) 109, Read Only Memory (ROM) 110, and I/O adapter 111 for connecting peripheral devices such as disk storage units 112 to the bus 108, a user interface adapter 113 for connecting a keyboard 116, a mouse 117, a speaker 114, a microphone 115, and/or other user interface devices such as a touch screen (not shown) to the bus 108, communication adapter 118 for connecting the work station to a communication network link 124 and a display adapter 119 for connecting the bus 108 to the display device 120. It will be apparent to those in the art that the mouse 117 may be a typical mouse as known in the industry, a track ball, light pen, or the like. The work station typically has resident thereon an operating system such as the IBM OS/2® operating system, the Apple System 7® operating system, or the Microsoft® Windows operating system. Those skilled in the art will appreciate that the present invention may also be implemented on platforms and operating systems other than those mentioned.

A block diagram of the main components of the host 102 and the communication lines to the host 102 is shown in FIG. 3. The host 102 has a central

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processing unit 128, connected to a memory 130, a communications interface 132, a user interface 133, an internet interface 134, an I/O control 136 and data storage devices 131, including tape storage 127 and disk storage 129. The user interface 133 is operatively connected to the user terminals 104 through 104' via the communication network links 124 through 124'. The communications interface 132 is operatively connected to content providers 105 through 105" via communication network links 125 through 125" respectively. The internet interface 134 is operatively connected to a public communication network 103 via a communication network link 126. In a preferred embodiment, the public communication network 103 is the Internet. The public communication network 103 will be referred to hereinafter as the Internet, it being understood that any public or private data communication network providing world-wide transmission capabilities could be utilized in accordance with the present invention. The communication links 124 through 124', 125 through 125" and 126, the communications adapter 118 of the user terminal 104, and the communications interface 132, the user interface 133 and the internet interface 134 of the host 102 together define an interactive communication network, whereby the host 102 communicates with the content providers 105 through 105", other content providers 135 and the user terminals 104 through 104'. It will be apparent to those in the art that the interactive communication network is a combination of networks linked through gateways, switches, routers and other types of communication linkages.

The I/O control 136 of the host 102 consists of standard networking that controls the input and output flow of data between databases 106 through 106" and the central processing unit 128. The databases 106 through 106" may include storage of data downloaded from content providers 105 through 105", such as, for example, reference materials, investment vehicle application data to generate application forms, application reference data, instructional data related to investment vehicle application data, broker licensing data, information about particular products, information about professional designations, continuing education information and registration data, and other similar types of data. The disk storage 129 may include, for example, data related to electronic mail or office systems such as word processor files, or the like. The tape storage 127 may include, for example, back-ups of the system and archived data. Detailed descriptions of the components of the host 102 will not be included herein, it being understood from the descriptions provided herein that those skilled in the art would be able to configure appropriate networks and computing devices to accomplish the principles of this invention as further described.

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The financial services information system 101 is designed using an open platform computing architecture. This design allows the general services offered to various institutions to be customized and expanded or contracted for particular brokerage firms or other institutions. In addition, the open platform allows additional content providers to be added to the system 101, along with any products or services offered by such content providers. As electronic systems of companies and institutions become increasingly automated and accessible through communication networks, the financial services information system 101 will be able to integrate the services provided by such companies and institutions into the existing financial services information system 101. Thus, the services provided by such companies and institutions will become readily available to end users.

Users (generally referred to hereinafter as brokers) including brokers, financial planners, insurance brokers, individual investors, and the like will preferably each access the host 102 through the user terminals 104 through 104'. The terminals 104 through 104' and their associated communication links 124 through 124' respectively, will be hereinafter referred to singularly as terminal 104 and communication link 124, it being understood that in a preferred embodiment of the present invention, multiple terminals and communication links will be utilized to access the host 102. The terminal has a terminal screen 121 through which the display device 120 (shown in FIG. 2) projects display screen images viewable by a broker. Preferably, the display device 120 can project graphical, as well as textual images.

The communication network link 124 linking the terminal 104 and the host 102 is configured for bi-directional communication. In one embodiment the communication network link 124 is a public switched telephone network provided by an independent communication service provider. Such providers may include MICA, Sprint, AT&T, and other providers offering similar communication networking capabilities. Alternatively, brokers can access the host 102 by having a dedicated communication line between the terminal 104 and the host 102. In this alternative configuration, a network router would channel communications of multiple terminals through the dedicated communication line to the host 102. In yet another embodiment, the communication network link 124 could be a private data network such as, for example, Prodigy®, Compuserve®, or American Online® type of network. The communication network link 124 could also be a public data network such as, for example, Internet or integrated services digital network (ISDN) type of network. Finally, the communication network link 124 may be established by wireless communication using ARDIS®, cellular digital packet data (CDPD), or OMNITRAC® type of service. It will be apparent to those in the art, that multiple

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groups of terminals, such as for example, groups of terminals belonging to different brokerage firms, may be connected to the host 102, with each group of terminals requiring its own communication network, such as one of the types just described with reference to the communication network link 124.

The communication network links 125 through 125" can be configured to connect the content providers 105 through 105", respectively, to the host 102 in any of the same network configurations just described with reference to the communication network link 124. That is, content providers 105 through 105" can communicate with the host 102 using public or private data networks, public switched telephone networks (PSTNs), wireless communication service, or dedicated communication lines. Depending upon the specific business arrangement, the communication network links 125 through 125" can be configured for unidirectional or bi-directional data transmission between the corresponding content providers 105 through 105" and the host 102.

In a preferred embodiment, the host 102 is also connected to the Internet via communication network link 126 for accessing content providers and other individuals and entities, shown generally by reference number 135, not otherwise configured for communication to the host 102. For example, the link to the Internet provides brokers with the ability to electronically transmit messages to clients or potential clients without exiting the financial services information system 101 and separately accessing the Internet or other data network. In another example, brokers can transmit electronic mail messages directly to content providers 105 through 105" requesting additional information or asking questions regarding the particular content provider's products.

FIGS. 4 through 14 show a preferred embodiment of the menu-driven financial services information system in flowchart format. FIG. 4 represents a main entry screen 142 and a main menu 144 of the financial services information system 101. The main entry screen 142 is a typical logon screen with security protection. In a preferred embodiment, the screen requires at least one password from the broker. The main entry screen 142 can be customized for individual licensed entities to provide multiple security layers. FIG. 15 shows an example of one main entry display screen which may appear on the terminal screen 121.

FIG. 4 also shows the menu structure of the main menu 144 of the financial services information system 101. The main menu 144 provides access major components of the financial services information system 101, including a news section 146, an office system 156, an electronic mail system 158, an options section 173, a securities section 174, a mutual funds section 192, an annuities section 220, an insurance section 280, an other financial services section 310, an education

section 322, a reference section 336, a financial planning section 340, a community center section 346, and a member services section 350. In addition, the main menu 144 also provides a selectable dynamic advertising section 352, which may be changed periodically and which offers content providers 105 visibility and accessibility to brokers via the main menu 144. FIG. 16 shows an example of one display screen for the main menu 144. The main menu screen shown in FIG. 16 has command buttons corresponding to each option. Any authorized broker can access any option by activating the command button corresponding to the desired option, using either the keyboard 116 or the mouse 117 of the broker's terminal 104.

FIG. 5 shows the menu structure of the news section 146. Several news providers 148 through 148" are accessible to the brokers through the terminals 104. Each news provider is connected to the host 102 as a content provider, such as content provider 105 via the communication network link 125, as shown in FIG. 3. Some news providers may be accessible through the Internet 103, rather than an alternative communication network such as network link 125. By way of example, the news provider 148 shows access to a news story 149. It will be apparent that each news provider may provide access to multiple news stories. Preferably, the news stories from different news providers will be formatted similarly and will provide similar options once a particular news story is accessed. For example, a news story display screen may show the text of the news story and any accompanying graphics in addition to the options of searching, accessing an internet home page of the particular news provider, accessing related stories or cites, viewing a list of contents for the particular news provider, and, if accessed through the Internet 103, accessing an Internet home page of the particular news provider.

which may appear on the broker's terminal screen 121. In FIG. 29, four exemplary primary news providers are displayed with their news provider logos and with a news highlight directly beneath the news provider logo. These exemplary primary news providers include CNN Interactive, CNNfn, USA Today, and The New York Times. In addition, other news provider names are shown in a scrollable block. The exemplary other news provider names include Barron's, The Wall Street Journal, Investors Daily, Financial Times, Dow Jones, Reuters, Business Wire, and PR Newswire. The news provider logos and the other listed news provider names define command buttons which can be activated by the broker to access desired news stories by the corresponding news provider. Brokers can access the listed news providers by using the mouse 117 or the keyboard 116 of the broker's terminal 104 to activate the command button corresponding to the desired news provider logo or news provider name.

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FIG. 6 shows the menu structure of the electronic office system 156 which provides electronic office system packages integrated with the financial services available on the financial services information system 101. The electronic office system 156 provides electronic office items including a calendar 160, an electronic address book 162, a to do list 164, a word processor 166, a spreadsheet 168, a calculator 170, and a customer information list 172. In addition, the electronic office system 156 also provides access to the electronic mail system 158.

FIG. 18 shows an example of one display for the electronic mail system 158 screen which may appear on the terminal screen 121. The electronic mail system 158 provides standard features of such systems, including, but not limited to, an in box, an out box, a discard box, and other capabilities including reading mail, sending mail, forwarding mail, saving mail and replying to received mail. An electronic mail message can be created, edited and transmitted by a broker through the broker's terminal 104 using the keyboard 116 and/or the mouse 117 to manipulate data on the terminal screen 121. The electronic mail message is then transmitted to the user interface 133 via the communication network link 124. The host 102 then directs the electronic mail message to the appropriate destination. For example, if the electronic mail message is addressed to another broker connected to the host 102, then the host can store the electronic mail message on the appropriate disk 129 of the data storage devices 131. Depending upon the specific default settings in the electronic mail system 158 for the broker receiving the mail message, a notification on the receiving broker's terminal screen 121 may be displayed indicating that the broker has received a mail message, which can be viewed on the terminal screen 121 by activating the appropriate command button using the keyboard 116 and/or the mouse 117 of the broker's terminal 104. The central processing unit 128 then accesses the appropriate disk 129 of the storage devices 131 to retrieve the electronic mail message and transmits that message to the broker's terminal 104 via the user interface 133 and the communication network link 124.

In an alternative embodiment, the electronic mail system 158 may be configured to store electronic mail messages in storage devices local to the brokers' terminals 104 through 104'. In this embodiment, the host 102 stores the electronic mail messages in the RAM 109 or other storage device 112 connected to the broker's terminal 104. The other storage device 112 in this embodiment could be part of a local area network to which the broker's terminal is attached.

Brokers can also transmit electronic mail messages to other individuals and entities not authorized to access the financial services information system 101. The host 102 is connected to a public communication network, such as the Internet 103, shown in FIG. 3, having world-wide electronic communication capabilities. The

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broker simply creates and transmits an electronic mail message using the electronic mail system 158, and the host 102 will use the communication network link 126 to transmit the mail message to the available world-wide public communication network, such as the Internet 103, which in turn transmits the mail message to the designated destination. Thus, the broker never needs to exit the financial services information system 101 for communicating to clients and others using electronic mail. Finally, the electronic mail system 158 of the present invention provides a critical link for integrating the financial services information system 101. In a preferred embodiment, the financial service sections provide automatic access to the electronic mail system 158 for transmitting electronic mail messages to content providers 105 through 105". When the electronic mail system is directly accessed through one of the financial services sections of the system 101, the appropriate electronic mail address is automatically generated in the electronic mail message for the broker. This feature saves time and therefore increases productivity of the brokers.

FIG. 19 shows an example of one display screen for the calendar 160. The screen shows an exemplary calendar entry "contact Mr. Jones" on the January 4, 1996 calendar day. FIGS. 20 and 21 show examples of screen displays providing more detailed information regarding the exemplary calendar entry as shown in FIG. 19. FIG. 20 shows data such as the calendar entry, the day, a description of the activity, the time of the activity, the duration of the activity, key words for the activity, a project area for the project to which the activity is related, a recurring prompt and an alarm prompt. In addition, a scrollable list of calendar days is also displayed with the calendar entries prominently displayed and overlapping the screen display as shown in FIG. 21. The calendar data may be stored in one of the databases, such as database 106, or alternatively, on one of the disks 129, and accessed by the central processing unit 128. The data is transmitted through the user interface 133 via the communication network link 124 for display on the terminal screen 121 for the broker to view and update. The calendar 160 also allows brokers to set appointments and have a follow-up notification prompt in order to track customers and automatically document any contact with the customer.

FIG. 22 shows an example of one display screen for the address book 162 of the office system 156. The display screen has exemplary address entries showing names, phone numbers and other information. FIG. 23 shows an example of one screen display with more detailed information pertinent to one of the exemplary address entries displayed in FIG. 22. For example, FIG. 23 displays information for a Mr. Tom Jones, including salutation, company and title, phone and facsimile numbers, work and home addresses, other related information, and custom fields.

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The address data may be stored in one of the databases, such as database 106, or alternatively, on one of the disks 129, and accessed by the central processing unit 128. The central processing unit 128 transmits the data to the appropriate terminal 104 through the user interface 133 via the communication network link 124. The display screens shown in FIGS. 22 and 23, are displayed on the terminal screen 121 of the terminal 104 for the broker to view and update.

FIG. 24 shows an example of one display screen for the to do list 164 of the electronic office system 156. The screen display shows an exemplary list of activity entries having a date, a summary, a description, a priority and a check-off box corresponding to each activity entry. FIGS. 20 and 21 show more detailed information with regard to one of the exemplary activity entries of the screen display shown in FIG. 24. The to do list 164 accesses data corresponding to the calendar 160 for displaying detailed information related to the activity entries in the to do list 164, such as the information shown in FIGS. 20 and 21. In a preferred embodiment, the display screens accessed from the to do list display screen shown in FIG. 24 are the same screens shown in FIGS. 20 and 21, that are accessed from the calendar display screen shown in FIG. 19. The to do list is dynamically linked to the calendar 160 so that data entry will only have to be performed once with regard to a particular activity. For example, if the broker enters data in the calendar 160 to contact Mr. Tom Jones on January 4, 1996, that information will automatically be displayed in the to do list 164 when the broker views the to do list display screen shown in FIG. 24.

FIG. 25 shows an example of one display screen for the word processor 166 of the electronic office system 156. The word processor 166 will provide standard features related to document creation. In a preferred embodiment, the word processor software is stored in the memory 130 and accessed by the central processing unit 128. A broker will have the option of storing files in the storage devices 131 of the host 102 or in storing files to hard disks (RAM) 109 or floppy disks 112 associated with the broker's terminal 104. The word processor 166 will be dynamically linked to the electronic address book 162, allowing automatic document creation such as letters, facsimile transmission sheets, and envelopes for names stored by the electronic address book 162.

FIG. 26 shows an example of one display screen for the spreadsheet 168 of the electronic office system 156. In a preferred embodiment, the spreadsheet software is stored in the memory 130 of the host 102 which is accessed by the central processing unit 128. The spreadsheet 168 provides standard spreadsheet capabilities integrated with the electronic office system 156. The brokers may store

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spreadsheet files in the storage devices 131 of the host 102 or in the hard disks (RAM) 109 or floppy disks 112 associated with the broker's terminal 104.

FIG. 27 shows an example of one display screen for the calculator 170 of the electronic office system 156. In a preferred embodiment, the calculator software is stored in the memory 130 and accessed by the central processing unit 128 of the host 102. Multiple types of calculators are provided in the calculator 170. The calculator include one type referred to in the financial services industry as the Rule of 72 calculator. These calculators provide a way of calculating the amount of money to invest at predefined time periods to grow to a particular amount in the future, while taking into account certain assumptions in the calculations related to the interest rate, the amount of base money used, taxes, and other related parameters. Another types of calculator is an RPN calculator, a present value calculator, and others.

FIG. 28-1 shows an example of one display screen for the customer information list 172 of the electronic office system 156. The customer information list 172 displays the financial data about individual clients. The display screen shown in FIG. 28 has an exemplary customer entry showing customer name and account data for customer John Doe. This data is retrieved by the host 102 from, e.g., content provider 105, which maintains the customer's financial accounts. For example, if a bank and a brokerage firm are commonly owned, the brokers would use the customer information list of the financial services information system 101 to access the customer's account information maintained on the bank's systems. In one embodiment of the present invention, the bank interacts with the host 102 as a content provider, such as, for example, content provider 105. When the broker accesses the customer information list screen through a search function, as shown in FIG. 28-1, and as a result requests information about a particular customer, the host 102 retrieves the requested data from the bank, or content provider 105. The host 102 then transmits the data to the broker's terminal 104 for display on the terminal screen 121. Some of the ways that this searching function may be implemented include a search by account type (e.g., search checking with sub-types of: advantage checking, benefit checking, checking other, collegiate checking, interest checking, personal checking, or small business checking). Similarly, other types of accounts and sub-types may be searched related to savings, money market, time deposits, or individual retirement accounts.

The open platform of the financial services information system 101 allows the host 102 to be operatively connected to a financial institution such as a bank for providing other financial services through the customer information list 172. For example, host 102 may be operatively connected to a bank, as for example, content provider 105, that allows brokers to open new accounts for customers by entering

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the appropriate input data required by a customer information list display screen, such as the one shown in FIG. 28-2. The host 102 transmits the input data for the new account to the bank, or content provider 105. Although the financial services information system 101 will not typically be permitted to directly update the content provider's system in the preferred embodiment, appropriate means such as, for example, batch file updates with error checking functions, will be used on the content provider's system to update the content provider's system with the new customer information. Also, the broker may be permitted to apply for loans, deposit and transfer funds, and access other banking services. The extent of interaction between the brokers and the bank, or content provider 105, systems will be defined by the particular bank, or content provider 105. The open platform architecture of the financial services information system 101 can accommodate any number of banking services offered by a content provider.

Finally, the customer account data on the content provider's system is dynamically updated for the appropriate individual account when transactions occur 15 in other portions of the financial services information system 101 that affect the individual's account data. For example, if a customer purchases 200 shares of a security through the financial services information system 101 and the broker requests the money to procure the shares be withdrawn from one of the customer's accounts, then the host 102 transmits this request to the bank, or content provider 105. Preferably, control is then passed to the bank's system to perform the necessary security checks and error-proofing procedures before the transaction is completed. Once the money is withdrawn from the customer's account and the content provider's system has updated the customer's accounts, the broker can then view the updated customer accounts by simply accessing the customer information list 172.

In an alternative preferred embodiment, several functions provided in the electronic office system 156 can be performed on a local system or hardware. For example, software for the word processor 166, the spreadsheet and the calculator could reside on a localized memory, such as, for example the ROM 116 of the terminal 104 or other memory associated with a local area network to which the terminal 104 is attached. In addition, the data files generated in the electronic office system 156 could also reside in localized memory, such as, for example the RAM 109 or the disks 112 of the terminal 104 or on other memory associated with a local area network to which the terminal 104 is attached. This preferred embodiment saves processing time and networking costs associated with the present invention.

FIG. 7 shows the menu structure of the securities section 174 of the financial services information system 101. The securities section 174 provides access to a

stock market ticker 176, a securities searching service 178, a securities transaction service 180, current trend information 182, and the news section 146. FIG. 30 shows an example of one display screen which may appear on the terminal screen 121 as the main menu display screen for the securities section 174. FIG. 30 shows command buttons corresponding to the stock market ticker 176, the securities searching service 178, the securities transaction service 180, the current trend information 182, and the news section 146. The command buttons can be activated by using the keyboard 116 or the mouse 117 of the terminal 104. Under each command button, a short explanation of the particular option associated with the command button is provided.

FIG. 31 shows an example of one display screen for the stock market ticker 176 which may appear on the terminal screen 121. The stock market ticker display screen shows current stock prices. In a preferred embodiment, the host 102 retrieves current stock market prices from a content provider, for example content provider 105, at predefined periodic intervals, such as every fifteen (15) minutes while the stock market is open. The stock prices are stored by the host 102 in the storage devices 131, or alternatively, in one of the databases 106 through 106". When a broker accesses the stock market ticker display screen, shown in FIG. 31, by activating the command button corresponding to stock market ticker 176, the host 102 transmits the most recently stored data representing the stock market prices to the terminal 104 for display on the stock market ticker display screen on the terminal screen 121. If desired, brokers can have the stock market ticker 176 customized to reflect real-time stock prices. However, this requires the host 102 to poll the content provider 105 for current stock prices every time the command button corresponding to the stock market ticket 176 is activated.

The stock market ticker 176 also provides brokers with the ability to access current stock prices and other financial information about specific companies. The stock market ticker 176 provides brokers with the ability to look up a company's market symbol and to use the market symbol to search for financial data related to the company. When a broker accesses the stock market ticker 176 and then enters a market symbol using the keyboard 116 or the mouse 117 of the terminal 104, the host 102 retrieves specific financial data about the individual company, by accessing a content provider, such as content provider 105, through the communication network link 125. Preferably, the content provider 105 would be a Value Line type of provider, having extensive financial data about individual companies. The host 102 transmits the retrieved financial data to the terminal 104, which is then shown on the stock market ticker screen, displayed on the terminal screen 121.

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FIG. 32 shows an example of one display screen for the securities searching service 178, which may appear on the terminal screen 121. The display screen provides searching capabilities for information related to companies and products. The securities searching service 178 allows brokers to perform a search using a company name 184, a product name 186, a product type 188 or a key word 190. After the broker inputs the desired search field using the keyboard 116 or the mouse 117, the host 102 accesses the appropriate content provider, such as content provider 105 through the communication network link 125. Preferably, the content provider 105 is a provider having extensive financial data about publicly held companies, such as, for example, a Value Line type of provider. A search for the desired information is performed by the content provider 105. If a match to data input for the particular search field is found, the found data is transmitted to the host 102 through the communication network link 125. If no match to the data input for the particular search field is found, however, then the host 102 may access the Internet 103 through the communication network link 126 to allow searching to continue via the Internet 103. If information is located, it is transmitted to the host 102 through the Internet 103 and the communication network link 126. The host 102 transmits the received information to the terminal 104 for displaying on the terminal screen 121. The displayed information preferably includes general information such as name, headquarters, officers, date founded, operations, occupied space, number of employees, market symbol, market rank, and some financial data. If no information related to the desired company or product is found, an appropriate message is displayed to the broker on the terminal screen 121 of the terminal 104. Preferably, once the data is displayed on the terminal screen 121, the broker has the option to directly contact the content provider 105, who supplied the displayed information, by using the electronic mail system 158. In this preferred embodiment, the electronic mail system 158 is directly accessible through the display screen, and the electronic mail address of the appropriate content provider 105 is automatically generated in the electronic mail message for the broker.

The securities transaction service 180, which is accessible through the display screen shown in FIG. 30, provides electronic applications for purchasing securities through the financial services information system 101. The securities transaction service 180 also provides an electronic suitability application and information related generally and specifically to securities. The central processing unit 128 of the host 102 retrieves securities application data related to the desired security from one of the databases, such as database 106, and generates an electronic securities application form which is transmitted to the terminal 104 through the communication network link 124 and displayed on the terminal screen 121. The

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broker may request instructional information about how to complete the securities application form. In response to the broker's request, the central processing unit 128 of the host 102 retrieves instructional data stored on one of the databases, such as database 106, and transmits the instructional information through the communication link 124 to the terminal 104 for display on the terminal screen 121. The instructional information may include a sample filled-in application form.

After the broker completes the electronic securities application form using the keyboard 116 or the mouse 117 to input securities application data, the application data input is checked for accuracy and completeness before being transmitted to the content provider, such as content provider 105. Preferably, content provider 105 processes securities transactions such as buying and selling securities and the like. The central processing unit 128 of the host 102, compares the application data input to securities application reference data stored in the database 106. If the application data input needs correction, or if the securities application form needs additional data input, the central processing unit 128 generates appropriate notification messages and the host 102 transmits the notification messages to the terminal 104 for display on the terminal screen 121. Alternatively, the securities application data input may be transmitted to the content provider 105 such that the content provider 105 does all of the necessary comparisons to the application reference data and then transmits appropriate notifications to the broker.

Once the securities application form is complete and no corrections are necessary, the host 102 transmits the application data input to the securities content provider 105 through the communication network link 125 or through the Internet 103, depending upon the particular arrangement with the securities content provider 105. Once the application is approved, the content provider 105 transmits a confirmation notification to the host 102 and the host 102 sends the notification to the terminal screen 121 of the broker's terminal 104. If a problem is encountered, then the content provider 105 transmits an appropriate notification to the host 102 and the host 102 sends the notification to the terminal screen 121 of the broker's terminal 104. Alternatively, any of the data, including the application data, the application reference data and the instructional data may not be stored by the host 102, but may remain with the content provider 105. Thus, the host 102 would have to query the content provider 105 each time such data was requested by a broker.

The current trend information 182, which is accessible through the display screen shown in FIG. 30, provides information from newsletter type services. A content provider, such as content provider 105, may download information to the host 102 for storage in one of the databases, such as database 106. When the broker

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activates the command button corresponding to current trend information 182 on the display screen, shown in FIG. 30, the central processing unit 128 retrieves information from database 106 and provides the retrieved data to the terminal 104 for displaying on the terminal screen 121. Alternatively, the content provider 105 may not download its information to the host 102 for storage. Rather, when the broker accesses the current trend information 182 by activating the corresponding command button on the display screen shown in FIG. 30, the host 102 retrieves the desired data directly from the appropriate content provider 105, and transmits the data to the broker's terminal 104 for display, without storing a file copy of the retrieved data. Finally, the system may be set up to allow some content providers to download information to the host 102, and some content providers to be directly accessed by the host 102 when the current trend information 182 is accessed.

The securities section 174 also provides brokers with direct access to the news section 146. As shown in the display screen of FIG. 30, the news section 146 has a corresponding command button that a broker can activate using the keyboard 116 or the mouse 117. When a broker activates the news section command button, the system branches directly to the news section 146. the news section display screen, such as the one shown in FIG. 29, is then displayed on the terminal screen 121 of the broker's terminal 104.

FIG. 8 shows the menu structure of the mutual funds section 192 of the financial services information system 101. The mutual funds section 192 provides access to a mutual funds ticker 194, a mutual funds searching service 196, a mutual funds transaction service 206, the current trend information 182, and the news section 146. FIG. 33 shows an example of one display screen for the main menu of the mutual funds section 192, which may appear on the terminal screen 121. FIG. 33 shows command buttons corresponding to the mutual funds ticker 194, the mutual funds searching service 196, the mutual fund transaction service 206, the current trend information 182 and the news section 146. The command buttons can be activated by using the keyboard 116 or the mouse 117 of the terminal 104. Under each command button, a short explanation of the particular option associated with the command button is provided.

FIG. 34 shows an example of one display screen for the mutual funds ticker 194 which may appear on the terminal screen 121. The mutual funds ticker display screen shown in FIG. 34 shows current mutual funds prices. In a preferred embodiment, the host 102 retrieves current mutual fund prices from a content provider, for example, content provider 105, at predefined periodic intervals, such as every fifteen (15) minutes while the financial markets are open. The mutual fund prices are stored by the host 102 in the storage devices 131, or alternatively, in one

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of the databases 106 through 106". When a broker accesses the mutual fund ticker display screen, shown in FIG. 34, by activating the command button corresponding to the mutual fund ticker 194 shown in FIG. 33, the host 102 transmits the most recently stored data representing the mutual fund prices to the terminal 104 for display on the mutual fund ticker screen on the terminal screen 121. If desired, brokers can have the mutual fund ticker 194 customized to reflect real-time mutual fund prices. However, this requires the host 102 to poll the content provider 105 for current mutual fund prices every time the command button corresponding to the mutual fund ticker 194 is activated.

FIG. 35 shows an example of one display screen for the mutual fund searching service 196, which may appear on the terminal screen 121. The display screen provides the same type of searching service described with reference to the securities searching service 178. However, the content provider accessed by the host 102 in response to a mutual fund search will preferably be a provider having extensive data about mutual funds, such as, for example, a Morning Star type of provider.

The mutual funds section 192 also provides brokers with direct access to the news section 146 and to the current trend information 182, both previously described herein. To access the news section 146 or the current trend information 182, the broker simply activates the command button corresponding to the desired option, using the keyboard 116 or the mouse 117 of the broker's terminal 104.

The mutual fund transaction service 206, which is accessible through the display screen shown in FIG. 33, provides electronic applications for purchasing mutual funds through the financial services information system 101. The mutual fund transaction service 206 also provides an electronic suitability application and information related generally and specifically to mutual funds. FIG. 36 shows an example of one display screen which may appear on the terminal screen 121 when the broker has activated the command button corresponding to the mutual fund transaction service 206 from the main menu display screen of the mutual fund section 192 shown in FIG. 33. The display screen shown in FIG. 36 prompts the broker regarding whether a suitability application has been completed. If a suitability application has not been completed, the broker activates the "NO" prompt of the display screen shown in FIG. 36. If the "NO" prompt is activated by the broker, then a suitability application is electronically displayed on the terminal screen 121 to be completed and submitted by the broker. Typically, each brokerage firm uses its own suitability application, which is approved by the National Association of Security Dealers (NASD). The financial services information system 101 can be customized to allow each financial institution, such as a brokerage firm,

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to use its own application. If a suitability application has previously been completed, the broker activates the "YES" prompt of the display screen shown in FIG. 36. If the "YES" prompt is activated, then a display screen for a mutual fund product center 210 is displayed.

The mutual fund product center 210 is customized for each financial institution accessing the system 101. The mutual fund product center 210 provides financial data and transaction capabilities for the specific mutual funds offered by the particular financial institution accessing the system 101. Typically, the brokers do not have transaction capabilities for mutual funds not offered by the brokers' firm. In a preferred embodiment, the mutual fund content providers, such as content provider 105, download information pertinent to their mutual funds to the host 102. The data is stored in one of the databases, such as database 106. Preferably, the mutual fund providers all download substantially the same type of information regarding their mutual funds.

In an alternative preferred embodiment, the mutual fund content provider 105 may not download any information to the host 102 for permanent storage or may only download some information to the host 102 for permanent storage. Instead, the host 102 may have to access the content provider 105 through the communication network link 125 each time a broker activates command buttons on the display screens of the financial services information system 101 corresponding to the content provider's mutual funds. In this embodiment, the content provider 105 downloads the pertinent mutual fund data each time a broker requests such data. The host 102 then does any necessary formatting or calculating and transmits the data directly to the terminal 104 for display on the terminal screen 121. The downloaded data, however, is not stored in the storage devices 131.

Within the product center 210, brokers may inquire generally about financial information related to particular mutual funds by selecting a ratings option 211, a pension option 212, a taxation option 213 and an investment goals option 114. Additionally, mutual fund groups 215 through 215', are accessible by the broker through the mutual fund product center 210. In a preferred embodiment, the financial services information system 101 can be customized for each brokerage firm or other financial institution accessing the system 101, such that the mutual fund groups 215 through 215' are accessible only by those brokers associated with brokerage firms or other financial institutions qualified to offer the mutual fund groups 215 through 215' to clients. Each of the selected mutual fund groups provides access to information about particular mutual funds 218 through 218' within the mutual fund group 215 through 215'. Finally, an electronic mutual fund

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application form 216 is also accessible from each of the mutual fund groups 215 through 215'.

FIG. 37 shows an example of one display screen for the mutual fund product center 210 which may appear on the terminal screen 121. The display screen for the mutual fund product center 210 as shown in FIG. 37 provides command buttons corresponding to the ratings option 211, the pension option 212, the taxation option 213, and the investment goals option 214. In addition, an area is provided in the display screen shown in FIG. 37 that allows the broker to scroll through a list of the available mutual fund groups 215 through 215' and select the desired mutual fund group 215 through 215' by using the keyboard 116 and/or the mouse 117 to highlight and activate the desired mutual fund group 215 through 215'.

Once the desired mutual fund group, such as mutual fund group 215, is activated by the broker the host 102 retrieves the appropriate data from the database 106 and transmits the data to the terminal 104 for display on the terminal screen 121. The mutual fund group data displayed on the terminal screen 121 will include general information regarding the selected mutual fund group and its investment strategy. In addition, each specific fund offered within the mutual fund group will have a corresponding command button displayed, which the broker can activate to view more detailed information about the selected specific fund. FIG. 38 is an example of one display screen for the Franklin Income Fund mutual fund group and its associated specific funds, which is representative of the type of data display that may appear on a broker's terminal 104.

Preferably, each mutual fund content provider, such as content provider 105, will download enough information about its mutual funds to give the broker accessing the information everything needed to advise clients and conduct transactions. However, if the broker needs additional information or would like to have questions answered, the broker will have the option to directly contact the mutual fund content provider 105 by using the electronic mail system 158 which automatically links to the Internet 103. In a preferred embodiment, the electronic mail system 158 is directly accessible through the display screen, and the electronic mail address for the content provider 105 is automatically generated in the electronic mail message for the broker.

After the broker selects a mutual fund, the broker can access the electronic application form 216 for the mutual fund. The financial services information system 101 can be customized to allow each mutual fund to have its own application form. In a preferred embodiment, the mutual fund content provider 105 downloads mutual fund application data, application reference data, and application instructional data to the host 102, which is stored in one of the databases, such as database 106. When

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the broker requests the particular mutual fund application form by activating the command button corresponding to the application form 216 on the terminal screen 121, the central processing unit 128 of the host 102 retrieves the application data from the database 106 and transmits the formatted mutual fund application data through the communication link 124 to the terminal 104 for display on the terminal screen 121.

FIG. 39 is one example of a display screen for a mutual fund application form which is representative of a type of application form display screen which may appear on the terminal screen 121. The broker may request instructional information about how to complete the mutual fund application form. The host 102 retrieves the instructional data stored on the database 106, and transmits the instructional information to the terminal 104 for display on the terminal screen 121. The instructional data may include a sample filled-in mutual fund application form. The broker uses the keyboard 116 and the mouse 117 to input application data to the mutual fund application form 216 displayed on the terminal screen 121. In addition, while filing out the application, the user may choose to view the mutual fund prospectus like the one shown in FIG. 63 which is selectively displayed on terminal screen 121. The prospectus may alternatively be printed by the user on a printer, sent by electronic mail to the user for later review, or stored locally for later review.

After the broker completes the mutual fund application form, the application data input is checked for accuracy and completeness before being transmitted to the mutual fund content provider, such as content provider 105. When the broker submits the mutual fund application data input, the central processing unit 128 of the host 102, compares the application data input to the mutual fund application reference data stored in the database 106. If the mutual fund application data input needs correction, or if the mutual fund application form 216 needs additional data input, the central processing unit 128 generates appropriate notification messages and the host 102 transmits the notification messages to the terminal 104 for display on the terminal screen 121. Alternatively, the mutual fund application data input may be transmitted to the content provider 105 such that the content provider 105 does all of the necessary comparisons to the application reference data and then transmits appropriate notifications to the broker.

After the application form 216 is complete and no corrections are necessary, the host 102 transmits mutual fund application data input to the mutual fund content provider 105 through the communication network link 125 or through the Internet 103, depending upon the particular arrangement with the mutual fund content provider 105. While the application data input is being transmitted and processed a processing display screen 217, such as the example display screen shown in FIG. 40.

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is displayed on the broker's terminal screen 121. After the application data input is processed, the mutual fund content provider 105 transmits an electronic mail message to the broker, with information regarding the application, such as, for example, whether the application was approved, the account number, and any other pertinent data. Preferably, a confirmation notice will appear on the broker's terminal screen 121 on the processing display screen 217, shown in FIG. 40.

FIG. 9 shows the menu structure of the annuities section 220 of the financial services information system 101. The annuity section 220 provides access to an annuities searching service 222, and annuities transaction service 232, the current trend information 182, and the news section 146. FIG. 41 shows an example of one display screen for the main menu of the annuities section 220 which may appear on the terminal screen 121. FIG. 41 shows command buttons corresponding to the annuities searching service 222, the annuities transaction service 232, the current trend information 182, and the news section 146. The command buttons can be activated by using the keyboard 116 or the mouse 117 of the terminal 104. Under each command button, a short explanation of the particular option associated with the command button is provided.

FIG. 42 shows an example of one display screen for the annuities searching service 222, which may appear on the terminal screen 121. The display screen provides the same type of searching service described with reference to the securities searching service 178. However, the content provider, such as content provider 105, that is accessed by the host 102 in response to an annuities search request, will preferably be a provider having extensive data about annuities, such as, for example, a Standard & Poor's or Moody's type of provider.

The annuities section 220 also provides brokers with direct access to the news section 146 and to the current trend information 182, both previously described herein. The annuities transaction service 232, which is accessible through the display screen shown in FIG. 41, provides electronic applications for purchasing annuities through the financial services information system 101. The annuities transaction service 232 also provides an electronic suitability application and information related generally and specifically to annuities. FIG. 43 shows an example of one display screen which may appear on the terminal screen 121 when the broker has activated the command button corresponding to the annuities transaction service 232 from the main menu display screen of the annuities section 220 shown in FIG. 41. The display screen as shown in FIG. 43, prompts the broker regarding whether a suitability application has been completed. This screen operates in substantially the same manner as the display screen shown in FIG. 36 in the mutual funds section 192.

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If the broker activates the "NO" prompt, then a suitability application is electronically displayed on the terminal screen 121. An example of a display screen for one suitability application which may appear on the terminal screen 121 is shown in FIG. 49. The suitability application shown in FIG. 49 prompts the broker for a client's answers to questions regarding risk tolerance, investment objectives, and time horizon. Once the broker has input data representing the client's answers to the questions in the suitability application, the broker activates an investor's summary command button, shown near the bottom of the suitability application of FIG. 49, and the central processing unit 128 of the host 102 uses the suitability application data input to calculate an investment information summary for the particular client. Once the investment information is calculated, the host 102 transmits the data to the terminal 104 to display on the display screen of FIG. 49 shown on the terminal screen 121. It will be appreciated that this processing can also be performed locally by the broker's terminal 104 or by a local network to which the broker's terminal is attached. The broker also has the option to request information about products most suitable for the particular client, based upon the suitability application.

If the broker activated the "YES" prompt on the display screen as shown in FIG. 36, or if the broker has requested information about suitable products after completing the suitability application, then a display screen for an annuities product center 236 is displayed. The annuities product center 236 is customized for each financial institution accessing the system 101. The annuities product center 236 provides financial data and transaction capabilities for the specific annuities offered by the particular financial institution. The annuities content providers, such as content provider 105, download information about their respective annuities to the host 102. The data is stored in one of the databases, such as database 106. Preferably, each annuities content provider downloads substantially the same type of information regarding its annuities as other annuities content providers.

In an alternative preferred embodiment, the annuities content provider 105 may not download any information to the host 102 for permanent storage or may only download some information to the host 102 for permanent storage. Instead, the host 102 may have to access the content provider 105 through the communication network link 125 each time a broker activates command buttons on the display screens of the financial services information system 101 corresponding to the content provider's annuities. In this embodiment, the content provider 105 downloads the pertinent annuity data each time a broker requests such data. The host 102 then does any necessary formatting or calculating and transmits the data directly to the terminal 104 for display on the terminal screen 121. The downloaded data, however, is not stored in the storage devices 131.

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Within the annuities product center 236, brokers may inquire generally about financial information related to annuities by selecting a fixed annuities option 248, a variable annuities option 246, a ratings option 244, a taxation option 242, a pension option 240, and an investment goals option 238. The fixed annuities option 248 provides the broker with access to fixed annuities 250 through 250'. In a preferred embodiment, the financial services information system 101 can be customized for each brokerage firm or other financial institution accessing the system 101, such that the fixed annuities 250 through 250' are accessible only by those brokers associated with brokerage firms or other financial institutions qualified to offer the fixed annuities 250 through 250' to clients. In a preferred embodiment, each of the selectable fixed annuities 250 through 250' provides access to information about the product including product features 262, qualified information 264, illustrations 266, agent information 268, ratings 270, non-qualified information 272, information on becoming an agent 274, direct access to the electronic mail system 158, and an application form 276. Preferably, the variable annuities option 246 provides similar options related to variable annuities.

FIG. 44 shows an example of one display screen for the annuities product center 236 which may appear on the terminal screen 121. The display screen for the annuities product center 236 as shown in FIG. 44 provides command buttons corresponding to the fixed annuities option 248, the variable annuities option 246, the ratings option 244, the taxation option 242, the pension option 240, and the investment goals option 238. The broker can access general information related to all annuities available through the broker's firm, by selecting the ratings option 244, the taxation option 242, the pension option 240 or the investment goals option 238.

The broker may access a list of available fixed annuities by activating the command button corresponding to the fixed annuities option 248 shown on the product center display screen in FIG. 44. Similarly, the broker may access a list of available variable annuities by activating the command button corresponding to the variable annuities option 246 shown in FIG. 44. FIG. 45 shows an example of one display screen for the fixed annuities option 248 listing exemplary fixed annuities, which is representative of the type of display screen which may appear on the terminal screen 121. The display screen shown in FIG. 45 has command buttons each corresponding to an exemplary fixed annuity available to the broker. In addition, the display screen in FIG. 45 also has command buttons corresponding to the ratings option 244 and the taxation option 242, which are preferably directly accessible from this display screen as well as the display screen shown in FIG. 44.

The broker can select a desired fixed annuity by using the keyboard 116 and/or the mouse 117 to activate the command button corresponding to the desired

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fixed annuity. Once the desired fixed annuity command button is activated by the broker, the host 102 will retrieve the appropriate data from the database 106 and transmit the data to the terminal 104 for display on the terminal screen 121. The annuity data displayed on the terminal screen 121 will include general information regarding the selected annuity. FIG. 46 shows an example of one display screen for the Principal Annuity which is representative of the type of data display that may appear on a broker's terminal screen 121. Also, as shown in FIG. 46, the display screen for a particular annuity will have command buttons corresponding to the product features 262, the qualified information 264, the illustrations 266, the agent information 268, the ratings 270, the non-qualified information 272, the information on becoming an agent 274, direct access to the electronic mail system 158, and the application form 276.

Preferably, each annuities content provider, such as content provider 105, will download enough information about its annuities to give the broker accessing the information everything needed to advise clients that conduct transactions. However, if the broker needs additional information or would like to have questions answered, the broker will have the option to directly contact the annuity content provider 105 by activating the command button corresponding to the electronic mail system 158. The electronic mail system 158 automatically generates the electronic mail address of the annuities content provider 105 in the electronic mail message for the broker, and will link to the Internet 103 once the broker transmits the electronic mail message.

The broker can select an annuities application form by activating the command button corresponding to the application form 276. The financial services information system 101 may be customized to allow each annuities provider to have its own application form. The annuities content provider 105 downloads annuities application data, application reference data, and application instructional data to the host 102, which is stored in one of the databases, for example, database 106. When the broker requests the particular annuity application form by activating the command button corresponding to the application form 276 on the terminal screen 121, the host 102 retrieves the application data from the database 106 and transmits the formatted application to the terminal 104 for display on the terminal screen 121.

FIG. 47 is one example of a display screen for an SPDA Annuity Application which is representative of the type of annuity application form which may appear on the terminal screen 121. The broker may request instructional information about how to complete the annuities application form as shown in FIG. 61. Specific help about a particular part of the form may be found by picking the subject area and actuating the go button. If beneficiary is the subject selected, then help text of a

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display screen shown in FIG. 62 which may appear on the terminal screen 121. The help system guides a user through the process of filling out the application and other activities by way of content sensitive help screens. The host 102 retrieves the instructional data stored on one of the databases, such as database 106, and transmits the instructional information to the terminal 104 for display on the terminal screen 121. The instructional information may include a sample filled-in application form. The broker uses the keyboard 116 and the mouse 117 to input data in the annuities application form 276 displayed on the terminal screen 121.

After the broker completes the annuity application form, the application input data is checked for accuracy and completeness before the being transmitted to the mutual fund content provider 105. When the broker submits the annuity application data input, the central processing unit 128 of the host 102 compares the application data input to the application reference data stored in the database 106. If the application data input needs correction, or if the application form 276 needs additional data input, the central processing unit 128 generates appropriate notification messages and the host 102 transmits the notification messages to the terminal 104 for display on the terminal screen 121. Alternatively, the annuity application data input may be transmitted to the content provider 105 such that the content provider 105 does all of the necessary comparisons to the application reference data and then transmits appropriate notifications to the broker.

Once the application form 276 is complete and no corrections are necessary, the host 102 transmits the annuities application data input to the annuities content provider 105 through the communication network link 125 or through the Internet 103, depending upon the particular arrangement with the annuities content provider 105. While the annuities application data input is being transmitted and processed a processing display screen 278, such as the example display screen shown in FIG. 48, is displayed on the broker's terminal screen 121. After the application data input is processed, the annuities content provider 105 transmits an electronic mail message to the broker providing information regarding the application, such as, for example, whether the application was approved, the account number, and any other pertinent data. Preferably, a confirmation notice will appear on the broker's terminal screen 121 on the processing display screen 278, shown in FIG. 48.

FIG. 10 shows the menu structure of the insurance section 280 of the financial services information system 101. The insurance section 280 provides access to individual insurance service 282, employee benefits 284, insurance searching service 286, and pensions 288. FIG. 50 shows an example of one display screen which may appear on the terminal screen 121 as the display screen for the insurance section 280 of the financial services information system 101. FIG. 50

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shows command buttons corresponding to each of the options available through the insurance section 280 of the system. Under each command button, text is displayed describing the particular option accessible through the corresponding command button.

With reference to FIG. 10, the individual insurance service 282 provides access to a variety of individual insurance selections. These selections include variable universal life insurance 290, adjustable life insurance 292, whole life insurance 294, universal life insurance 296, term life insurance 298, and long term care insurance 300. FIG. 51 shows an example of one display screen which may appear on the terminal screen 121 as the display screen for the individual insurance service 282 when that particular option is selected by activating the corresponding command button shown in FIG. 50. A broker can access the individual insurance selections and electronically process applications for customers using the individual insurance selections 290 through 300. The host 102 retrieves the appropriate application data from the appropriate database, such as database 106, which has been downloaded by a content provider, such as content provider 105. The host 102 then generates and transmits electronic application forms to be displayed on the terminal screen 121 of the broker's terminal 104. Once the broker submits the displayed electronic application form for processing and the necessary error checking is performed, the central processing unit 128 transmits the electronic application form through the communication interface 132 to the appropriate content provider, such as content provider 105. It will be apparent that in this example, the content provider 105 may be the insurance company for whom the broker works. Thus, the electronic application form may simply be transmitted to the local system of the broker's insurance company.

The employee benefits 284, shown in FIG. 10, provides information and products for employee benefits that a broker can view on the terminal screen 121 of the terminal 104. For example, an entity involved in providing employee benefits packages for companies can be connected to the financial services information system 101 as, for example, content provider 105. The broker can then access information for clients regarding available employee benefits packages available from the content provider 105. The content provider 105 may simply provide information to the system 101 on its available employee benefits packages, or the content provider 105 may allow brokers to actually purchase employee benefits packages through the system 101 for their clients. The open platform architecture of the financial services information system 101 allows for any number of arrangements between such content providers and the system 101.

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The searching service 286 provides search capabilities to brokers for searching various insurance policies and products. The host 102 accesses the appropriate content provider, such as content provider 105, to request a search for a certain insurance product. If the product is not found, the search may continue through the Internet 103. Once the product information is found, the data is transmitted to the host 102 which then transmits the data for display on the terminal screen 121 of the broker's terminal 104. If no product information is found, the host 102 transmits an appropriate notification message to the terminal 104 for display to the broker.

Finally, the pension option 288, shown in FIG. 10, provides menu options for a 401(k) plan 302, a profit sharing plan 304, an individual retirement account (IRA) 306, and a defined contribution plan 308. The options available through the pension option 288 are provided as funding vehicles for clients of the brokers. Content providers, such as content provider 105, are accessible to the host 102 of the system 101, for providing information about particular products used in 401(k) plans, profit sharing accounts, IRAs and defined contribution plans. The content provider 105 may simply transmit such information to the host 102, or the content provider 105 may allow brokers to actually set up services for clients utilizing the content provider's product or products as the funding vehicle for a 401(k) plan, a profit sharing account, an IRA or a defined contribution plan. The open platform architecture of the financial services information system 101 allows for any number of arrangements between such content providers and the system 101.

FIG. 52 shows an example of a display screen for the pension information 288 which may appear on the terminal screen 121. Each of the options under the pension option 288, shown in FIG. 10, corresponds to a command button on the display screen shown in FIG. 52. The broker can view the desired option by activating the corresponding command button using the keyboard 116 or the mouse 117 of the terminal 104.

of the financial services information system 101. The other financial services section 310 provides access to electronic financial services including money market accounts 312, credit card accounts 314, saving accounts 316, mortgage accounts 318, and trusts 320. Brokerage firms are increasingly expanding financial services that they offer. As their financial services expand, the brokerage firms need systems in place that allow electronic utilization of these services. The present invention provides a system having expanded financial services electronically integrated with the other services and tools commonly employed in brokerage firms, with some of the services not being electronically automated before this invention. FIG. 53 is an

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example of one display screen which may appear on the terminal screen 121 as the display screen for the other financial services section 310. The display screen shown in FIG. 53 has command buttons that correspond to each of the options provided in the other financial services section 310. The broker can access any of the options by using the keyboard 116 or the mouse 117 to activate the appropriate command button corresponding to the desired option.

FIG. 12 shows the menu structure for the education section 322 of the financial services information system 101. The education section 322 provides a dynamic interactive system for users to fulfill federal, state or industry required continuing education requirements. The education section 322 provides access to a continuing education service 324, a license service 326, a professional designation information service 328, and a sales service 330. FIG. 54 is an example screen display which may appear on the terminal screen 121 as the display screen for the education service 322. The screen shown in FIG. 54 has command buttons corresponding to each of the options provided by the education service 322. Brokers can access any of the displayed options by activating the corresponding command button using the keyboard 116 or the mouse 117 of the broker's terminal 104.

Brokers can access information and registration materials for continuing education courses by activating the command button corresponding to the continuing education service 324. The information and registration materials are transmitted to the host 102 from content providers, such as content provider 105, who want to disseminate the materials to brokers. The data may be stored by the host 102 in one of its databases, such as database 106, and updated periodically. Alternatively, the content provider 105 transmits the data only when requested by the host 102. A registration form is displayed on the terminal screen 121 of the broker's terminal, which the broker can complete by entering registration data input using the keyboard 116 and the mouse 117. Once the registration form is complete the broker may submit the registration data input. The registration data input is transmitted to the appropriate organization, such as content provider 105. The registration data input is transmitted to the host 102, and then through the Internet 103 to the content provider 105, or through the communication network link 125 established between the content provider 105 and the host 102. After the content provider 105 receives the registration data input, it can send an electronic mail message to the broker confirming that the broker is registered for the particular course and providing other pertinent information related to such course, such as the date, time, location and registration number for the course. As previously explained herein, the content provider 105 may send the electronic message to the host 102 through the Internet 103 or through the communication network link 125 established between the content

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provider 105 and the host 102. The host 102 then directs the message to the appropriate mailbox in the electronic mail system 158 of the system 101.

If a particular education course can be taken without attending a seminar, the broker can receive all of the materials for the course, including the required test, electronically through the financial services information system 101. In this situation, after the content provider 105 receives the registration data input, it can send the course materials and the test to the broker, which the broker will receive through the electronic mail system 158. Alternatively, the content provider 105 can transmit the materials and the test to the host 102 for direct access by the broker. The broker could view the materials and associated test on the terminal screen 121 of the broker's terminal 104 by activating the command button corresponding to the continuing education service 324, without having to register with the content provider 105 and then waiting for a response. Regardless of the networking, after the course materials have been reviewed the broker view the corresponding test on the terminal screen 121 and complete the test using the keyboard 116 and/or the mouse 117 of the broker's terminal 104. The broker then submits the completed test to the content provider 105 via the electronic mail system 158. The content provider 105, in turn, sends an electronic mail message to the broker notifying the broker of the test results. If the broker passed the test, the content provider 105 may also provide forms to the broker attached to the electronic mail message for submitting the information regarding the continuing education course to the appropriate licensing board. Finally, the continuing education content providers, such and content provider 105, can transmit electronic mail message reminders to brokers regarding future continuing education requirements. Thus, the continuing education services 324 of the financial services information system 101 offers a dynamic interactive capability between brokers and education service providers, allowing brokers to maintain their broker licenses in a simple and efficient manner.

Brokers can access the license service 326 of the education section 322 by activating the corresponding command button on the display screen as shown in FIG. 54. The license service 326 provides information regarding state and federal licensing requirements for brokers, including licensing for securities, options, annuities, mutual funds, insurance and other financial planning services. The licensing information may be transmitted to the host 102 from licensing agencies, such as content provider 105. The data may be stored by the host 102 in one of its databases, such as database 106, and updated periodically. Alternatively, the content provider 105 may transmit the licensing information, only when requested by the host 102, such as in response to a request from a broker for specific licensing information.

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The license service 326 permits a broker to electronically inquire whether the broker is licensed in a particular state. The host 102 polls the content provider having licensing data for the particular state, such as content provider 105, for information regarding the broker's licensing in that state. It will be apparent that the content provider 105 could also be an entity having information about brokers licensed for particular products. The content provider 105 then transmits the desired information to the host 102, through the communication network link 125, or through the Internet 103. The host 102 then notifies the broker, through a licensing display screen on the terminal screen 121, or through the electronic mail system 158. Thus, the broker can electronically determine whether he or she can provide services to a client residing in another state. In a preferred embodiment, if the broker is not licensed, then the licensing display screen will display a message indicating that the broker is not licensed in the client's state for the particular product, and will prevent the broker from submitting the application. Further, in a preferred embodiment the system 101 will automatically check whether the broker submitting the application is licensed in the client's state of residence for the particular product, and will display the appropriate message and prevent the broker from submitting the application if the broker is not licensed.

Finally, because the financial services information system 101 utilizes an open platform design, the system has the capability of providing electronic licensing registration materials to brokers and submitting completed electronic licensing registration forms to the appropriate licensing agencies. The brokers could receive notification from the various licensing agencies regarding licensing decisions through the electronic mail system 158.

Brokers can access the professional designation services 328 of the education section 322 by activating the corresponding command button on the display screen, as shown in FIG. 54. The professional designation services 328 provides information about a variety of professional designations, shown generally by reference numbers 333 through 337. FIG. 55 shows an example of a display screen for the professional designation information services 328 which may appear on the terminal screen 121. The screen shown in FIG. 55 has command buttons corresponding to various professional designations, each of which can be activated by a broker. For example, Certified Fund Specialists ("CFS"), Certified Financial Analyst ("CFA"), and Certified Financial Planner("CFP") type of designations may be available options. Once the broker activates the command button corresponding to the desired professional designation, a screen (e.g., the screen shown in FIG. 55-2) will be displayed on the terminal screen 121 with a statement about the designation and the

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option to view more detailed information about the organization, the designation, and requirements for achieving certification.

The content providers, such as content provider 105, providing information about the professional designations preferably will be the organizations offering certification for the particular professional designation. The content provider 105 may provide general information to the host 102 for storage in one of its databases, such as database 106. Thus, a broker can simply access the information from the host 102 by activating the command button corresponding to the desired professional designation, shown on the terminal screen 121. The content provider 105 can then simply download updated information regarding the professional designation at periodic intervals. Alternatively, a content provider 105 may prefer not to permanently download its information, but rather, allow the host 102 to retrieve requested information via the Internet or the other communication network, such as for example, communication network link 125, if available, when a broker has requested information about their particular professional designation, by activating the appropriate command button.

Brokers can access the sales service 330 of the education section 322 by activating the corresponding command button on the display screen, as shown in FIG. 54. Brokers can purchase educational related materials through the sales service 330, by sending purchase requests directly to the appropriate content provider, such as content provider 105 via the communication link 124 to the host 102 and then through either the communication link 125 or through the Internet 103.

FIG. 13 shows the menu structure of the reference section 336. The reference section 336 provides access to multiple resources, shown generally by reference numbers 338 through 338", to enable brokers to access and retrieve information on companies and their financial data, in addition to other financial information pertinent to securities, annuities, mutual funds, options, insurance services, interest rates and other information related to the financial industry. A representative listing of reference materials that may be accessible through the reference section 336 include, for example, Dunn & Bradstreet, Value Line, Duff & Phelps, Moody's, Standard & Poor's, Periodicals, PNC Investment, Federal Reserve, Wall Street Transcript, Business Week, Barron's, Forbes, Fortune, American Banker, Bank Credit Analyst, Dow Jones News, Reuters, Business Wire, and PR Newswire. FIG. 56 shows an example of a display screen that may appear on the terminal screen 121 as the display screen for the reference services section 336. The screen shown in FIG. 56 provides command buttons corresponding to each reference option 338 through 338" which can be activated using the keyboard 116 or the mouse 117 of the terminal 104.

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The information provided by accessing the reference services section 336 can be provided in several ways. Each of the reference options 338 through 338" will have information provided by the corresponding content provider. The content providers, such as content provider 105, can periodically transmit data to the host 102 for storing in one of the databases, such as database 106. When a broker accesses a particular reference option, such as reference option 338, through the display screen, such as the one shown in FIG. 56, then the host 102 can simply retrieve the requested information from the database 106 and display the requested information on the terminal screen 121. Alternatively, the host 102 could retrieve the requested information directly from the content provider 105 via the Internet or the other communication network link 125, if available, established between the content provider 105 and the host 102.

With reference to FIG. 4, the financial services information system 101 also provides access to the financial planning services section 340, the community center section 346 and the member services section 350. These sections correspond to command buttons accessible from the display screen of the main menu 144, such as the one shown in FIG. 16. The financial planning services section 340 generally provides generic analysis and reporting capabilities on various investment vehicles. The analytical tools and reporting capabilities can be customized by the broker. This service is significant because of its generic analytical capability. Analytical tools used by brokers usually have been created by a product provider and, therefore, contain information primarily applicable to the particular products offered by the product provider. Commonly, customers seek more general advice from brokers, such as what type of investment vehicles to use, rather than which particular product to buy. For example, a customer may wish to know whether a tax deferred or taxable product would be more appropriate for the customer's particular financial needs. This type of generic analysis is provided in the financial planning services section 340 of the financial services information system 101. It will be appreciated that processing for the financial services section 310 may occur in the central processing unit 128 of the host 102 or may occur in a local processing unit, such as the CPU 107 of the terminal 104 or in another central processing unit of a local area network to which the terminal 104 is attached.

The financial planning services section 340 will also provide access to a tax service 342 and a legal service 344. A broker can send an electronic mail message to the tax service 342 using the electronic mail system 158. The host 102 will transmit the electronic mail message to the tax service 342 via the Internet 103 or other communication network established between the tax service 342 and the host 102. The tax service 342 will provide the requested information and submit any

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invoices for such information back to the broker via the Internet 103 or other communication network. Once the host 102 receives the electronic mail message from the tax service 342, the host 102 will direct the mail message to the appropriate mailbox of the electronic mail system 158. The legal service 344 can be utilized in the same manner as the tax service 342. A broker can submit an electronic mail message with a legal question and the host 102 will transmit the mail message to the legal service 344. The legal service 344 will then supply the requested information, including an invoice for services rendered, back to the broker.

The community center section 346 which is accessible from the main menu 144, provides an electronic bulletin board 348 accessible by all authorized brokers. A broker simply activates the command button corresponding to the community center section 346 on the display screen, as shown in FIG. 16. The electronic bulletin board 348 is then displayed on the terminal screen 121. The brokers can view information provided and information requests posted on the electronic bulletin board 348. Brokers can electronically respond to services or information requests posted on the electronic bulletin board 348 using the electronic mail system 158. In addition, brokers can individually request help or advice from other brokers, and can offer services by posting messages on the electronic bulletin board 348.

In a preferred embodiment, the community services section 346 also accommodates electronic business forums where a broker can access the system 101 and listen to a particular commentator discuss a particular subject matter. The commentator may be in any location having access to a communication network, such as the Internet 103, for accessing the host 102. The commentator's discussion is transmitted to the host 102 through the available communication network. The host 102 makes the discussion available to the broker, who can access the discussion through the community center section 346. Such business forum discussions will be communicated through the broker's terminal 104 when the broker activates the command button corresponding to the community center section 346 on the main menu display screen as shown in FIG. 16. The broker can send electronic mail messages to the commentator during the forum, using the electronic mail system 158, to ask questions or to comment on the subject.

The member services section 350, accessible from the main menu 144, is available for brokers to set specific system defaults and parameters. For example, the broker can change passwords, set modem parameters, and the like.

FIG. 14 shows the menu structure of the dynamic advertising section 352 of the financial services information system 101. An example display structure is shown in FIG. 14. The display structure shown in FIG. 14 includes space 354 for content provider advertising, spaces 358 through 362 for brief news headlines, and

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space 364 for advertisements for business forums. In addition, a space 356, preferably shown as "What's New" to directly access the news section 146. The dynamic advertising section 352 shown in the example display screen in FIG. 16 shows an example of the above described format. The brokers can directly access information about the financial organization or company, such as Standard & Poor's, shown in advertisement space 352 by activating the command space corresponding to the logo or name. The brokers can directly access news stories shown in advertisement spaces 358 through 362 by activating the command space corresponding to the desired news story. Also, brokers can directly access the news section 146 by activating the command space corresponding to the "What's New" caption. The advertisement space 364 shown in the display screen of FIG. 16, may be used to alert brokers of upcoming business forums. The brokers can directly access more detailed information about upcoming business forums by activating the command space corresponding to the business forum advertisement space.

Finally, as it will be apparent from a review of the example display screens shown in FIGS. 17 through 56, each display screen has a command bar, near the bottom of each display screen, with separate options corresponding to each of the main components of the system 101, including the main menu 144, the securities section 176, the mutual funds section 192, the annuities section 220, the insurance section 280, the other financial services section 310, the education section 322, the reference section 336, the financial planning section 340, the community center section 346, and the member services 350. Thus, a broker can directly access any of the main components from any display screen in the system 101, by activating the command bar button corresponding to the desired component, shown on the display screen 121 on the broker's terminal 104. It will be apparent that other components may also be included in the command bars on the display screens, such as, for example, the electronic mail system 158.

The present invention can be summarized in reference to FIGS. 57 through 60 which, together, define a flowchart of a preferred embodiment of a financial services information processing method for use between a broker end user and a content provider on an interactive communication network, shown generally with reference to 118, 124 through 124', 125 through 125'', 126, 132, 133, and 134. This method is performed by device-implemented steps in a series of distinct processing steps 400-452 that can be implemented in one or more processors.

Referring to FIG. 57, the host 102 or the content provider 105, or both, are searched 402 for information requested by the broker end user. Data is communicated 404 between the broker end user and the content provider, such as content provider 105, via the interactive communication network. The

communicated data includes a mutual fund electronic application form 216, generated from financial instrument application data. In a preferred embodiment, many types of data including mutual fund data is communicated 404 between the broker end user and the content provider 105. The communicated data includes electronic application forms generated from financial instrument application data, with the financial instruments being related to mutual funds, annuities, securities, and security options.

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Graphical user interface elements, including the electronic application form 216, are displayed 408 by the display device 120. After the broker end user inputs client application data to complete the electronic application form 216, the client application data is received 410 by the system 101. The client application data is then sent 412 to a content provider, such as content provider 105. When further information or correction is needed based on a comparison of the client application data to financial instrument application reference data, a notification is received 414 from the content provider 105 through the interactive communication network, such that the client application data is checked prior to submission to the content provider 105. Alternatively, the content provider may be a host 102 that sends the client application data directly to another content provider for comparison and processing. In such an embodiment, the host 102 provides the notifications to the broker end user regarding the need for additional information or corrections. In yet another alternative, a host 102 obtains information from the content provider and does the comparison at the host 102 and provides notifications to the broker end user regarding the need for additional information or corrections, before submission to the content provider. The above described comparison is preferably performed for each of the types of financial instrument application forms, and may be implemented in any of the above described ways.

In a preferred embodiment, data other than electronic application forms is also communicated between the broker end user and the content provider 105. For example, instructions for filling out the financial instrument application or sample filled-in financial instrument application forms are communicated 404. Subsequently, corresponding graphical user interface elements including the instructions for filling out the financial instrument application forms and the sample filled-in financial instrument application forms are displayed 408 by the display device 120.

Inquiries to the content provider, such as content provider 105, regarding broker licensing information may be conducted 416. For example, an inquiry may be whether a particular broker submitting the client application data to the content provider 105 is licensed in the client's state of residence to conduct transactions

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related to the type of financial instrument indicated in the client application data. The inquiry is conducted prior to submission of the application data to the content provider 105 and is electronically confirmed or otherwise addressed 416 by the content provider 105. The content provider 105 may, alternatively, be an entity having general licensing information for a particular state or states, such as a federal or state licensing agency, a private agency handling licensing data, or the like.

Data received by the broker end user is cached 406 or locally stored, in one preferred embodiment, for subsequent use in a data cache. Thus, previously received information is retrieved from the data cache rather than through an inquiry to the content provider via the interactive communication network. The cached data may include, for example, the application data used to generate the electronic application forms for mutual funds, annuities, securities, and security options.

The host 102 interfaces 412 to several content providers 105 through 105" to provide data to the broker end user, through the interactive communication network. A comparison is performed 414 between the client application data and the financial instrument application reference data at the host 102, based on criteria obtained from the content providers 105 through 105". The host 102 then provides a notification 414 to the broker end user when further information or correction is needed. The client application data is subsequently submitted 418 to one of the content providers 105 through 105" after the client application data is complete and correct.

Referring to FIG. 58, searching for desired information is also provided 424. A search for information within the data stored at the host 102 related to the content providers 105 through 105" may be requested 424. After such a search is performed, the search results received from the host 102 are provided 424 for the broker end user.

Data, such as financial instrument price information is received 426 from the content provider, such as content provider 105. After the financial instrument price information is received 426, graphical user interface elements including the financial instrument price information are displayed 430 by the display device 120. In addition, information about financial instruments is received 426 from the content providers. Data for several financial instruments may be received 426. Once the information about the financial instruments is received 426, graphical user interface elements including the financial instruments are displayed 430 by the display device 120. Once the information about the financial instruments is displayed 430, a search for information about a particular financial instrument within the information about the several financial instruments may be requested 424. The information about the particular financial instrument is received 426 from the content provider 105 and is then provided 430 for the broker end user.

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In a preferred embodiment, many types of data may be retrieved from the content providers 105 through 105". Some types of data that may be retrieved 426 include: product or service advertising information, financial product reference information, financial planning information, insurance information, and news information. After the data has been retrieved, graphical user interface elements, including the product or service advertising information, financial products reference information, financial planning information, insurance information, and news information, are displayed 430 by the display device 120.

As previously stated, data received via the interactive communication network, like the electronic application forms for financial instruments, preferably is cached 428 to reduce the need to access the interactive communication network for data which was previously downloaded. Examples of types of data that is preferably cached include: instructions for filling out the financial instrument application forms, sample filled-in financial instrument application forms, financial instrument price information, advertising information, financial product reference information, financial planning information, insurance information, and news information.

With reference to FIG. 59, electronic mail is passed 436 between the broker end user and the content provider, such as content provider 105. Graphical user interface elements, including received electronic mail, are displayed 436 by the display device 120. This electronic mail may contain many different types of media such as text, graphics, sound and multi-media.

The content provider, can be a home office for the broker end user so that electronic mail can pass between the broker end user and a computer in the home office 436. Also, the content provider can be an electronic mail server, so that electronic mail can pass between the broker end user and other brokers connected to the electronic mail server 436. Further, the content provider can be a financial instrument product provider so that electronic mail can pass between the broker end user and a computer at the financial instrument product provider 436. In addition, the content provider can be a tax service 342 or a legal service 344 so that electronic mail can pass between the broker end user and a tax professional or an attorney, respectively 436. Alternatively, the content provider can be both a tax service 342 and a legal service 344. The content provider can be an electronic bulletin board 348 so that the broker end user can access services 436 on the electronic bulletin board 348. The content provider can also act as a fax server computer so that the broker end user can send facsimiles to or receive facsimiles from the fax server computer. Finally, the content provider can be a live chat session provider so that the broker end user can participate 436 in a live chat session.

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The content provider can also act as a broker continuing education service. The broker continuing education service preferably uses electronic mail to send electronic mail to the broker end user notifying the broker end user that a continuing education course is needed to maintain a broker license 438. In addition, electronic mail is received from the broker end user which contains test answers for the continuing education course 440. If the broker end user passes the test, then electronic mail is sent to the broker end user notifying the broker end user that the test was passed 442. This electronic mail may provide forms to the broker end user for sending to a broker licensing board, certifying that the continuing education course has been successfully completed 442. If, however, the broker end user fails the test, then electronic mail is sent to the broker end user notifying the broker end user that the test was failed 442.

Finally, with reference to FIG. 60, an electronic office item is provided 448. The electronic office item may be a word processor, a spreadsheet, a calendar, a to do list, an address book, or a financial calculator, or any combination of the above. The electronic office item provides a client information link to deposit, loan, and bank services of a client 450, such that the broker end user can selectively access at least one of these services at the content provider.

The financial services information method may be implemented in several ways. First, it may be implemented on the interactive communication network 118, 124 through 124', 125 through 125'', 132, 133, and 134, having the user terminals 104 through 104' through which the broker end users can access the communication network. As previously described herein, the host 102 is operatively connected to the user terminals 104 through 104', and the content providers 105 through 105'' via the interactive communication network. In addition, the host 102 has the storage devices 131 and the databases 106 through 106'' for storing data. This stored data may be information from either the content provider or from the broker end user. Also, the host 102 stores software program code in the memory 130, and the central processing unit 128 accesses and executes the software program code stored in the memory 130. The software program code may include, for example, code for the word processor, the spreadsheet, the calendar, the to do list, the address book, and the financial calculator. Preferably, the host 102 is also capable of collecting statistical information on usage activities of the broker end user.

The financial services information method may alternatively be implemented on the interactive communication network, having the user terminals 104 through 104', through which the broker end users can access the communication network and in which the user terminals 104 through 104' perform all of the functions described with reference to the host 102. For example, the user terminal 104 can be

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operatively connected to the content providers 105 through 105" through the interactive communication network. Data can be communicated between the user terminal 104 and the content providers 105 through 105". Data from the content providers can be requested by the broker end user through the user terminal 104, received by the CPU 107 of the user terminal 104, displayed by the display device 120 of the user terminal 104, and cached by the storage devices 112 of the user terminal 104. Software program code can be stored in the ROM 110 of the user terminal 104. In addition, the user terminal 104 can be linked directly to the world-wide communication network, such as the Internet 103, for electronic communication to the other content providers 135 and clients.

In yet another embodiment, the financial services information method may be implemented on the interactive communication network, having the user terminals 104 through 104', through which the broker end users can access the communication network and in which the user terminals 104 through 104' share the functions of the host 102. For example, the host 102 may perform all of the data communication with the content providers 105 through 105''. However, software program code for electronic office items such as, the word processor, the spreadsheet, the calendar, the to do list, the address book, and the financial calculator may be stored in the storage devices 112 of the user terminal 104 and accessed and executed by the CPU 107 of the user terminal 104. In sum, the functions can be divided between the host 102 and the user terminals 104 through 104' in a variety of ways. It will be apparent that the processing by the user terminals 104 through 104' could alternatively be performed by processors in a local area network to which the terminals 104 through 104' are connected, and that the stored data could be stored in storage devices of the local area network.

It is to be understood that even though numerous characteristics and advantages of various embodiments of the present invention have been set forth in the foregoing description, together with details of the structure and function of various embodiments of the invention, this disclosure is illustrative only, and changes may be made in detail, especially in matters of structure and arrangement of parts within the principles of the present invention to the full extent indicated by the broad general meaning of the terms in which the appended claims are expressed.

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What is claimed is:

- A financial services information system for use between a broker end user and a content provider on an interactive communication network, comprising:
 - (a) graphical user interface means for presenting data as graphical information to the broker end user on a display device;
 - (b) input means for receiving data input by the broker end user;
 - (c) communicating means for communicating data between the broker end user and the content provider via the interactive communication network; and
 - processing means, operatively coupled to the graphical user interface (d) means, input means, and communicating means, for providing an electronic application form to the graphical user interface means for display to the user on the display device, the electronic application form being received from the content provider through the communicating means, the electronic application form being generated from financial instrument application data, the processing means comprising application checking means for checking whether client application data input by the user on the electronic application form needs further information or correction by sending the client application data to the content provider through the communicating means and receiving a notification from the content provider through the communicating means which is subsequently provided to the graphical user interface means when such further information or correction is needed based on a comparison of the client application data to financial instrument application reference data such that the client application data is checked prior to final submission to the content provider.

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2. The financial services information system of claim 1 wherein: the electronic application form received from the content provider is generated from application data for a financial instrument selected from the group consisting of a mutual fund, an annuity, a security, and a security option, the notification received from the content provider is based on a comparison of the client application data to financial instrument application reference data corresponding to a type of financial instrument application data used to generate the electronic application form.

- 3. The financial services information system of claim 2 wherein the processing means comprises means for providing instructions for filling out the financial instrument application form to the graphical user interface means for display to the user on the display device, the instructions being received from the content provider through the communicating means.
- 4. The financial services information system of claim 2 wherein the processing means comprises means for providing a sample filled-in financial instrument application form to the graphical user interface means for display to the user on the display device, the sample filled-in financial instrument application form being received from the content provider through the communicating means.
- The financial services information system of claim 2 wherein the application checking means comprises means for electronically confirming through an inquiry to the content provider through the communicating means that a particular broker submitting the client application data to the content provider is licensed in the client's state of residence to conduct transactions related to the type of financial instrument indicated in the client application data prior to final submission to the content provider.
- 6. The financial services information system of claim 1 further comprising storage means, operatively coupled to the processing means, for caching data received by the communicating means for subsequent use such that information previously received by the communicating means is retrieved from the storage means rather than through an inquiry to the content provider through the communicating means.
- 7. The financial services information system of claim 2 wherein the content provider comprises a host which interfaces to a plurality of content providers to provide data to the financial services information system via the interactive network from the plurality of content providers, the host performing the comparison between the client application data and the financial instrument application reference data such that the host submits the client application data to one of the plurality of content providers after the client application data is complete and correct.

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- 8. The financial services information system of claim 7 wherein the processing means further comprises:
 - (d)(i) means for requesting the host to search for information within the data stored at the host related to the plurality of content providers; and
 - (d)(ii) means for providing search results to the graphical user interface means for display to the user on the display device which is received from the host through the communicating means.
- The financial services information system of claim 2 wherein the processing means further comprises means for providing financial instrument price information to the graphical user interface means for display to the user on the display device, the financial instrument price information being received from the content provider through the communicating means.
 - 10. The financial services information system of claim 2 wherein the processing means further comprises means for providing information about a plurality of financial instruments to the graphical user interface means for display to the user on the display device, the information about the plurality of financial instruments being received from the content provider through the communicating means.
 - 11. The financial services information system of claim 10 wherein the processing means further comprises:
- 25 (d)(i) means for requesting the content provider to search for information about a particular financial instrument within the information about the plurality of financial instruments; and (d)(ii) means for providing information about the particular financial instrument to the graphical user interface means for display to the user on the display device which is received from the content
 - 12. The financial services information system of claim 2 wherein the processing means further comprises:

provider through the communicating means.

d)(i) electronic mail means for passing electronic mail between the broker and the content provider through the communicating means; and

- (d)(ii) means for providing received electronic mail to the graphical user interface means for display to the user on the display device.
- The financial services information system of claim 12 wherein the electronic mail means comprises means for passing electronic mail consisting of a media type selected from the group consisting of text, graphics, sound, and multi-media files.
- The financial services information system of claim 12 further comprising a 14. computing device at the content provider operatively coupled to the 10 interactive communication network, the computing device being selected from the group consisting of: a home office electronic mail server such that electronic mail can pass between the broker end user and other users connected to the electronic mail server in the home office, a host-based electronic mail server such that electronic mail can pass between the broker 15 end user and other broker end users connected to the host-based electronic mail server, a simple mail transfer protocol (SMTP) electronic mail server such that electronic mail can pass between the broker end user and other users on the Internet connected to the SMTP electronic mail server, a financial instrument product provider electronic mail server such that 20 electronic mail can pass between the broker end user and other users connected to the electronic mail server at the financial instrument product provider, a tax service electronic mail server such that electronic mail can pass between the broker end user and a tax professional connected to the tax service electronic mail server, a legal service electronic mail server such that 25 electronic mail can pass between the broker end user and an attorney connected to the legal service electronic mail server, an electronic bulletin board computer such that the broker end user can access services on the electronic bulletin board computer, a fax server computer such that the broker end user can send facsimiles to or receive facsimiles from the fax 30 server computer, and a live chat session provider computer such that the broker end user can participate in a live chat session.
 - The financial services information system of claim 12 further comprising a computing device at the content provider operatively coupled to the interactive communication network, the computing device performing operations of a broker continuing education service which uses the electronic mail means to perform the following functions:

	(a) s	sending an electronic mail to the broker end user notifying the broker	
	e	end user that a continuing education course is needed to maintain a	
	t	proker license;	
	(b) r	eceiving an electronic mail from the broker end user containing test	
5		enswers for the continuing education course;	
	(c) s	sending an electronic mail to the broker end user which notifies the	
		proker end user that the test was passed and provides forms to the	
		proker for sending to a broker licensing board which certify that the	
		continuing education course has been successfully completed, if the	
		proker end user passed test; and	
	(d) s	ending an electronic mail to the broker end user which notifies the	
	b	proker end user that the test was failed, if the broker end user failed	
		est.	
16.	The fina	The financial services information system of claim 2 wherein the processing	
		urther comprises:	
	(d)(i)	advertising means for providing advertising about products or	
		services by retrieving advertising information from the content	
		provider through the communicating means; and	
	(d)(ii)	means for providing the advertising information to the graphical	
		user interface means for display to the user on the display device.	
17.	The financial services information system of claim 2 wherein the processing		
	means further comprises:		
	(d)(i)	reference means for providing reference information about	
		financial products by retrieving financial products reference	
		information from the content provider through the communicating means; and	
	(d)(ii)	means for providing the financial products reference information	
	(-)()	to the graphical user interface means for display to the user on the	
		display device.	
18.	The finar	ncial services information system of claim 2 wherein the processing	
	means further comprises:		
	(d)(i)	financial planning means for providing financial planning	
	17.	(b) r (c) s (d) s (d) s (d) s (d)(ii) 17. The final means fu (d)(i) (d)(ii) 18. The final means fu	

services by retrieving financial planning information from the

content provider through the communicating means; and

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- (d)(ii) means for providing the financial planning information to the graphical user interface means for display to the user on the display device.
- 5 19. The financial services information system of claim 2 wherein the processing means further comprises:
 - (d)(i) insurance means for providing insurance services by retrieving insurance information from the content provider through the communicating means; and
- 10 (d)(ii) means for providing the insurance information to the graphical user interface means for display to the user on the display device.
 - 20. The financial services information system of claim 2 wherein the processing means further comprises:
 - (d)(i) news means for providing a news resource by retrieving news information from the content provider through the communicating means; and
 - (d)(ii) means for providing the news information to the graphical user interface means for display to the user on the display device.
 - The financial services information system of claim 1 wherein the processing means further comprises electronic office means for providing an electronic office item selected from the group consisting of: word processor, spreadsheet, calendar, to do list, address book, and financial calculator, the electronic office means selectively utilizing the graphical user interface means, the input means, and the communicating means to provide functions of the electronic office item to the broker end user.
 - The financial services information system of claim 21 wherein the electronic office means comprises a client information link to deposit, loan, and bank services of a client such that the broker end user can selectively access at least one of these services at the content provider through the communicating means.
 - The financial services information system of claim 1 further comprising storage means, operatively coupled to the processing means, for storing software program code related to functions in the financial services information system, the processing means comprising program execution

means for retrieving a portion of the software code from the storage means and executing the software code.

- The financial services information system of claim 23 wherein the storage means comprises electronic office software program code selected from the group consisting of: word processor, spreadsheet, calendar, to do list, address book, and financial calculator, the program execution means comprising means for executing the electronic office software program code.
- 10 25. A financial services information system, comprising:
 - (a) an end user apparatus, comprising:
 - (i) a display device:
 - graphical user interface means, operatively coupled to the display device, for presenting data as graphical information to the broker end user on the display device;
 - (iii) input means for receiving data input by the user;
 - (iv) communicating means, operatively coupled to an interactive communication network, for communicating data between the broker end user and the interactive communication network; and
 - (v) processing means, operatively coupled to the graphical user interface means, input means, and communicating means, for providing an electronic application form to the graphical user interface means, the electronic application form being received from the interactive communication network through the communicating means, the electronic application form being generated from financial instrument application data, the processing means comprising application checking means for checking whether client application data input by the user on the electronic application form needs further information or correction by sending the client application data to the interactive communication network through the communicating means and receiving a notification from the interactive communication network through the communicating means which is subsequently provided to the graphical user interface means when such further information or correction

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is needed based on a comparison of the client application data to financial instrument application reference data; and

- (b) a content provider operatively coupled to the interactive communication network; and
- (c) a host means, operatively coupled to the interactive communication network, for storing and forwarding information between the end user apparatus and the content provider on the interactive communication network.
- The financial services information system of claim 25 wherein the interactive communication network is selected from the group consisting of: a public switched telephone network (PSTN), a public data network, a private data network, and a wireless data service.
- The financial services information system of claim 25 wherein: the electronic application form received from the content provider is generated from application data for a financial instrument selected from the group consisting of a mutual fund, an annuity, a security, and a security option, the notification received from the interactive communication network is based on a comparison of the client application data to financial instrument application reference data corresponding to a type of financial instrument application data used to generate the electronic application form.
- 28. The financial services information system of claim 27 wherein the end user apparatus processing means further comprises means for providing instructions for filling out the financial instrument application form to the graphical user interface means, the instructions being received from the interactive communication network through the communicating means.
- The financial services information system of claim 27 wherein the end user apparatus processing means further comprises means for providing a sample filled-in financial instrument application form to the graphical user interface means, the sample filled-in financial instrument application form being received from the interactive communication network through the communicating means.
 - 30. The financial services information system of claim 27 wherein the end user apparatus application checking means comprises means for electronically

confirming through an inquiry to the interactive communication network that a particular broker submitting the client application data to the interactive communication network is licensed in the client's state of residence to conduct transactions related to the type of financial instrument indicated in the client application data prior to final submission to the content provider.

- 31. The financial services information system of claim 27 further comprising storage means, operatively coupled to the end user apparatus processing means, for caching data received by the communicating means for subsequent use such that information previously received by the communicating means is retrieved from the storage means rather than through an inquiry to the interactive communication network through the communicating means.
- The financial services information system of claim 27 wherein the end user apparatus communicating means comprises means for bypassing the host means to directly access the content provider via the interactive communication network.
- The financial services information system of claim 27 wherein the host means is operatively coupled to a plurality of content providers via the interactive communication network such that the host means is a gateway which passes data between the plurality of content providers and the end user apparatus communicating means, the host means comprising means for performing the comparison between the client application data and the financial instrument application reference data such that the host means submits the client application data to one of the plurality of content providers after the client application data is complete and correct.
- 30 34. The financial services information system of claim 27 wherein the host means comprises means for collecting statistical information on usage activities of the broker end user.
- The financial services information system of claim 25 wherein the host means comprises means for processing stored information from the end user apparatus and the content provider.

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- 36. The financial services information system of claim 27 wherein the end user apparatus processing means further comprises means for providing, to the graphical user interface means, financial instrument price information received from the interactive communication network through the end user apparatus communicating means.
- The financial services information system of claim 27 wherein the end user apparatus processing means further comprises means for providing, to the graphical user interface means, information about a plurality of financial instruments received from the interactive communication network through the end user apparatus communicating means.
- 38. The financial services information system of claim 37 wherein the end user apparatus processing means further comprises means for requesting the host means to search for information about a particular financial instrument within the information about the plurality of financial instruments available on the interactive communication network and means for providing information about the particular financial instrument to the graphical user interface means which is received from the host means through the communicating means.
 - 39. The financial services information system of claim 27 wherein the end user apparatus processing means further comprises electronic mail means for providing, to the graphical user interface means, received electronic mail passed between the broker and the content provider through the end user apparatus communicating means.
- The financial services information system of claim 39 wherein the electronic mail means comprises means for passing electronic mail consisting of a media type selected from the group consisting of text, graphics, sound, and multi-media files.
- 41. The financial services information system of claim 39 further comprising a computing device at the content provider operatively coupled to the interactive communication network, the computing device being selected from the group consisting of: a home office electronic mail server such that electronic mail can pass between the broker end user and other users connected to the electronic mail server in the home office, a host-based

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electronic mail server such that electronic mail can pass between the broker end user and other broker end users connected to the host-based electronic mail server, a financial instrument product provider electronic mail server such that electronic mail can pass between the broker end user and other users connected to the electronic mail server at the financial instrument product provider, a tax service electronic mail server such that electronic mail can pass between the broker end user and a tax professional connected to the tax service electronic mail server, a legal service electronic mail server such that electronic mail can pass between the broker end user and an attorney connected to the legal service electronic mail server, an electronic bulletin board computer such that the broker end user can access services on the electronic bulletin board computer, and a live chat session provider computer such that the broker end user can participate in a live chat session.

- 15 42. The financial services information system of claim 39 further comprising a computing device at the content provider operatively coupled to the interactive communication network, the computing device performing operations of a broker continuing education service which uses the end user apparatus electronic mail means to perform the following functions:
 - (a) sending an electronic mail to the broker end user notifying the broker end user that a continuing education course is needed to maintain a broker license;
 - (b) receiving an electronic mail from the broker end user containing test answers for the continuing education course;
 - (c) sending an electronic mail to the broker end user which notifies the broker end user that the test was passed and provides forms to the broker end user for sending to a broker licensing board which certify that the continuing education course has been successfully completed, if the broker end user passed test; and
 - (d) sending an electronic mail to the broker end user which notifies the broker end user that the test was failed, if the broker end user failed test.
- The financial services information system of claim 27 wherein the end user apparatus processing means further comprises advertising means for providing, to the graphical user interface means, product or service advertising information retrieved from advertising information at the content provider through the communicating means.

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- 44. The financial services information system of claim 27 wherein the end user apparatus processing means further comprises financial products reference means for providing, to the graphical user interface means, financial products reference information retrieved from financial products reference information at the content provider through the communicating means.
- The financial services information system of claim 27 wherein the end user apparatus processing means further comprises financial planning means for providing, to the graphical user interface means, financial planning information retrieved from financial planning services at the content provider through the communicating means.
 - 46. The financial services information system of claim 27 wherein the end user apparatus processing means further comprises means for providing, to the graphical user interface means, insurance information retrieved from insurance services at the content provider through the communicating means.
 - 47. The financial services information system of claim 27 wherein the end user apparatus processing means further comprises news means for providing, to the graphical user interface means, news information retrieved from a news resource at the content provider through the communicating means.
- 48. The financial services information system of claim 25 wherein the end user apparatus processing means further comprises electronic office means for providing an electronic office item selected from the group consisting of: a word processor, spreadsheet, calendar, to do list, address book, and financial calculator, the electronic office means selectively utilizing the end user apparatus display device, the end user apparatus graphical user interface means, the end user apparatus input means, and the end user apparatus communicating means to provide functions of the electronic office item to the broker end user.
- The financial services information system of claim 48 wherein the electronic office means comprises a client information link to deposit, loan, and bank services of a client such that the broker end user can selectively access at least one of these services through the communicating means.

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- 50. The financial services information system of claim 25 wherein the end user apparatus further comprises storage means, operatively coupled to the end user apparatus processing means, for storing software program code related to functions in the financial services information system, the end user apparatus processing means comprising program execution means for retrieving a portion of the software code from the storage means and executing the software code.
- The financial services information system of claim 50 wherein the end user apparatus storage means comprises electronic office software program code selected from the group consisting of: word processor, spreadsheet, calendar, to do list, address book, and financial calculator, the end user apparatus program execution means comprises means for executing the electronic office software program code.
 - 52. A financial services information processing method for use between a broker end user and a content provider on an interactive communication network, comprising the steps of:
 - (a) communicating data between the broker end user and the content provider via the interactive communication network, the data including an electronic application form generated from financial instrument application data;
 - (b) displaying graphical user interface elements including the electronic application form;
 - (c) receiving client application data input by the broker end user on the electronic application form;
 - (d) sending the client application data to the content provider; and
 - (e) receiving a notification from the content provider when further information or correction is needed based on a comparison of the client application data to financial instrument application reference data such that the client application data is checked prior to submission to the content provider.
- The method of claim 52 wherein the communicating step comprises

 communicating data including an electronic application form generated from financial instrument application data for a financial instrument selected from the group consisting of a mutual fund, an annuity, a security, and a security option.

The method of claim 53 wherein the communicating step further comprises 54. communicating data including instructions for filling out the financial instrument application form and the displaying step comprises displaying graphical user interface elements including the instructions.

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The method of claim 53 wherein the communicating step further comprises communicating data including a sample filled-in financial instrument application form and the displaying step comprises displaying graphical user interface elements including the sample filled-in financial instrument application form.

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The method of claim 53 further comprising a step of electronically 56. confirming through an inquiry to the content provider that a particular broker submitting the client application data to the content provider is licensed in the client's state of residence to conduct transactions related to the type of financial instrument indicated in the client application data prior to final submission to the content provider.

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The method of claim 52 further comprising a step of caching data received 57. by the broker end user for subsequent use in a data cache such that previously received information is retrieved from the data cache rather than through an inquiry to the content provider via the interactive communication network.

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The method of claim 53 wherein the content provider comprises a host which 58. interfaces to a plurality of content providers to provide data to the broker end user via the interactive network from the plurality of content providers, the method further comprising a step of performing the comparison between the client application data and the financial instrument application reference data at the host, and wherein the communicating step further comprises 30 communicating the client application data such that the client application data is submitted to one of the plurality of content providers after the client application data is complete and correct.

The method of claim 58 further comprising steps of requesting the host to 59. 35 search for information within the data stored at the host related to the plurality of content providers and providing search results which is received from the host.

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60. The method of claim 53 wherein the communicating step further comprises receiving financial instrument price information from the content provider and the displaying step comprises displaying graphical user interface elements including the financial instrument price information.

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The method of claim 53 wherein the communicating step further comprises 61. receiving information about a plurality of financial instruments and the displaying step comprises displaying graphical user interface elements including information about the plurality of financial instruments.

- 10 The method of claim 61 further comprising steps of requesting the content 62. provider to search for information about a particular financial instrument within the information about the plurality of financial instruments and providing information about the particular financial instrument which is 15 received from the content provider.
 - The method of claim 53 wherein the communicating step further comprises 63. passing electronic mail between the broker end user and the content provider and the displaying step comprises displaying graphical user interface elements including received electronic mail.
 - 64. The method of claim 63 wherein the electronic mail comprises a media type selected from the group consisting of text, graphics, sound, and multi-media files.

65. The method of claim 52 wherein the content provider is selected from the group consisting of: a home office for the broker end user such that electronic mail can pass between the broker end user and a computer in the home office, an electronic mail server such that electronic mail can pass 30 between the broker end user and other brokers connected to the electronic mail server, a financial instrument product provider such that electronic mail can pass between the broker end user and a computer at the financial instrument product provider, a tax service such that electronic mail can pass between the broker end user and a tax professional, a legal service such that electronic mail can pass between the broker end user and an attorney, an electronic bulletin board such that the broker end user can access services on the electronic bulletin board, and a live chat session provider such that the broker end user can participate in a live chat session.

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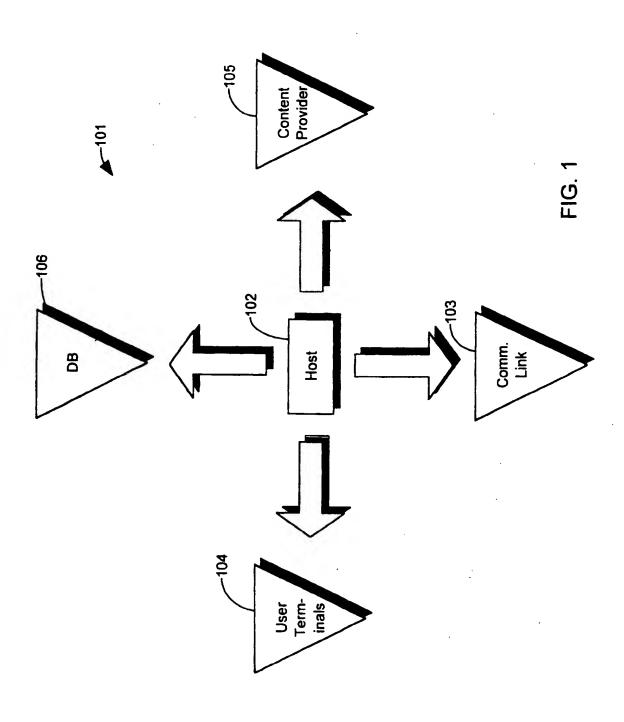
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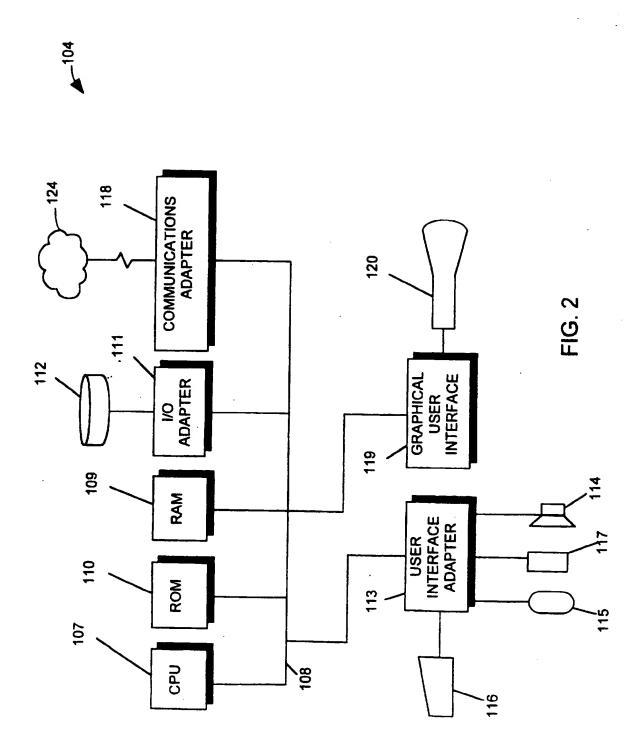
- 66. The method of claim 63 wherein the content provider is a broker continuing education service which uses electronic mail to perform the following functions:
 - (a) sending an electronic mail to the broker end user notifying the broker end user that a continuing education course is needed to maintain a broker license:
 - receiving an electronic mail from the broker end user containing test answers for the continuing education course;
 - (c) sending an electronic mail to the broker end user which notifies the broker end user that the test was passed and provides forms to the broker end user for sending to a broker licensing board which certify that the continuing education course has been successfully completed, if the broker end user passed test; and
 - (d) sending an electronic mail to the broker end user which notifies the broker end user that the test was failed, if the broker end user failed test.
- 67. The method of claim 53 wherein the communicating step further comprises retrieving product or service advertising information from the content providers and the displaying step comprises displaying graphical user interface elements including the advertising information.
- 68. The method of claim 53 wherein the communicating step further comprises retrieving financial product reference information from the content providers and the displaying step comprises displaying graphical user interface elements including the financial products reference information.
- 69. The method of claim 53 wherein the communicating step further comprises retrieving financial planning information from the content providers and the displaying step comprises displaying graphical user interface elements including the financial planning information.
- 70. The method of claim 53 wherein the communicating step further comprises retrieving insurance information from the content providers and the displaying step comprises displaying graphical user interface elements including the insurance information.

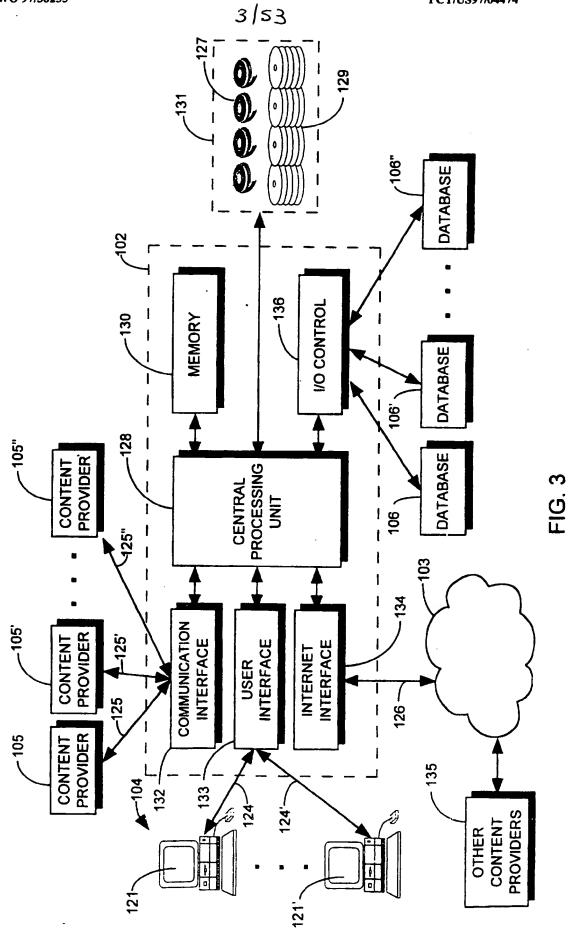
71. The method of claim 53 wherein the communicating step comprises retrieving news information from the content provider and the displaying step comprises displaying graphical user interface elements including the news information.

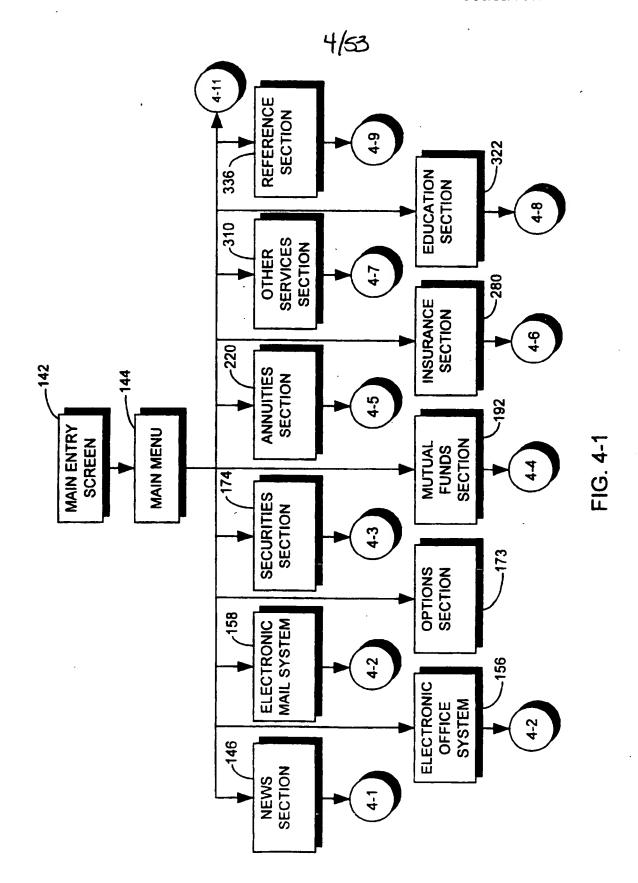
- 72. The method of claim 53 further comprising a step of providing an electronic office item selected from the group consisting of: a word processor, spreadsheet, calendar, to do list, address book, and financial calculator.
- The method of claim 72 wherein the step of providing an electronic office item comprises providing a client information link to deposit, loan, and bank services of a client such that the broker end user can selectively access at least one of these services at the content provider.

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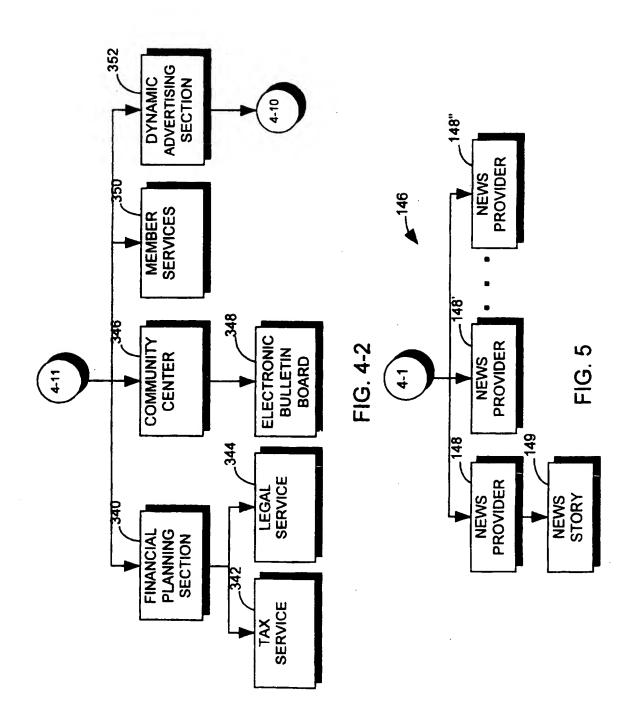




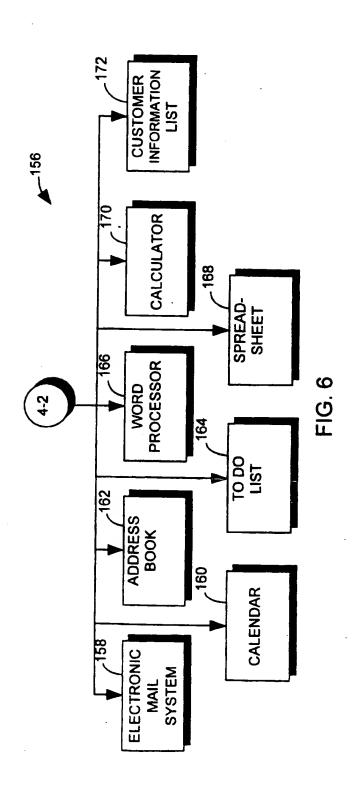


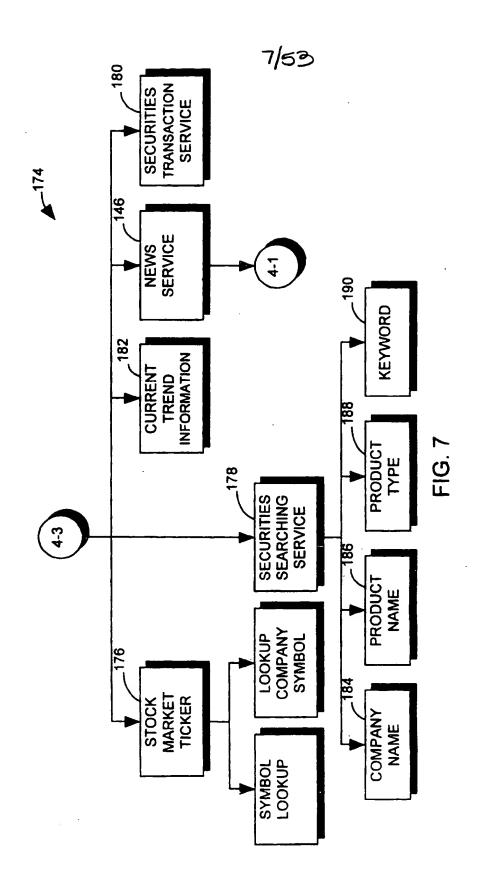


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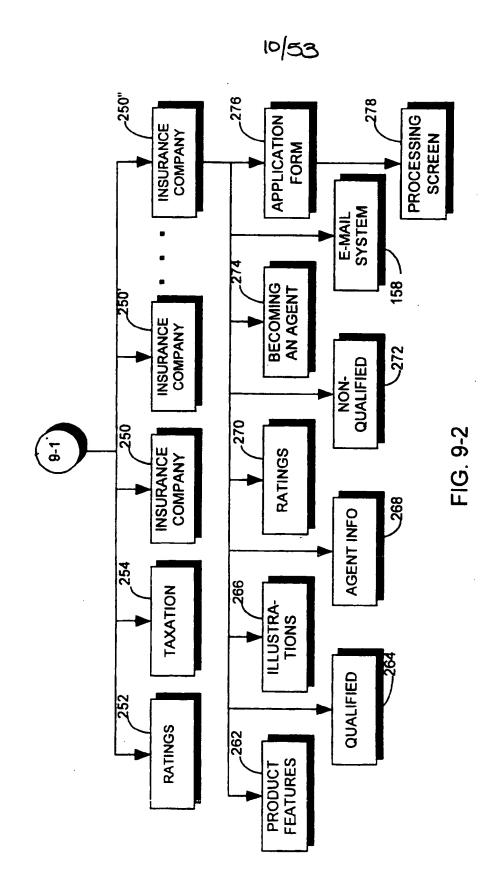


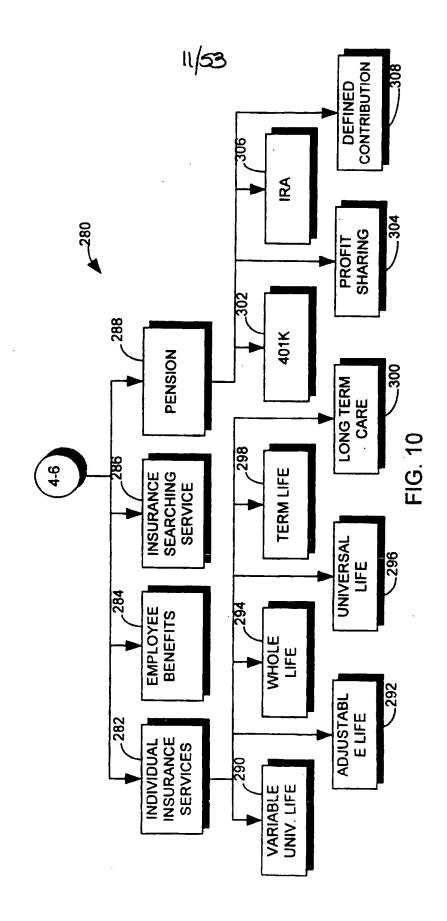
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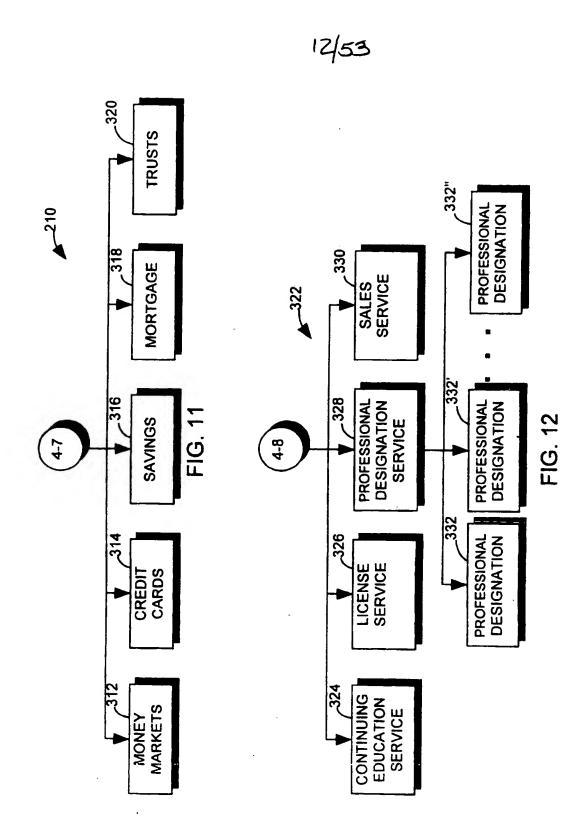


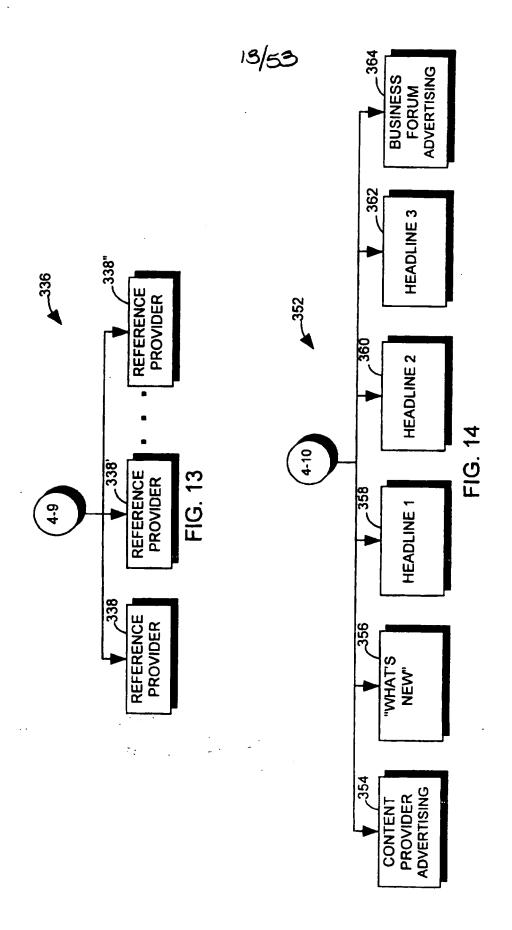


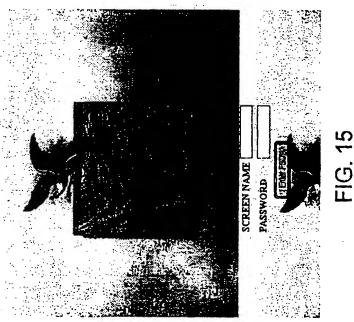
9-1











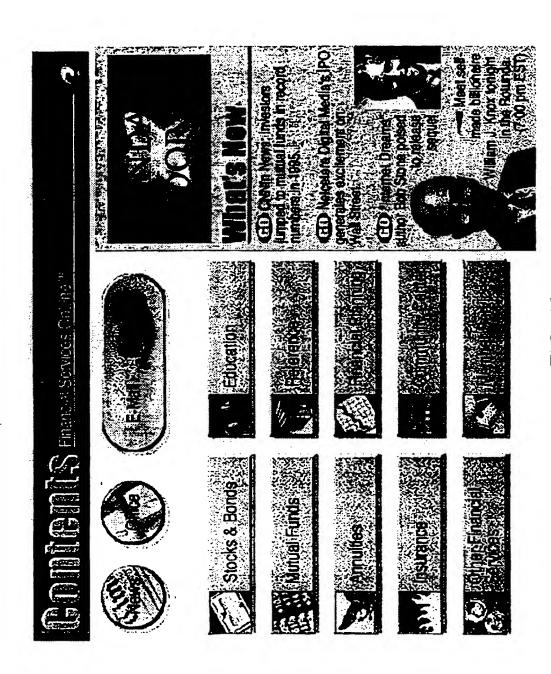
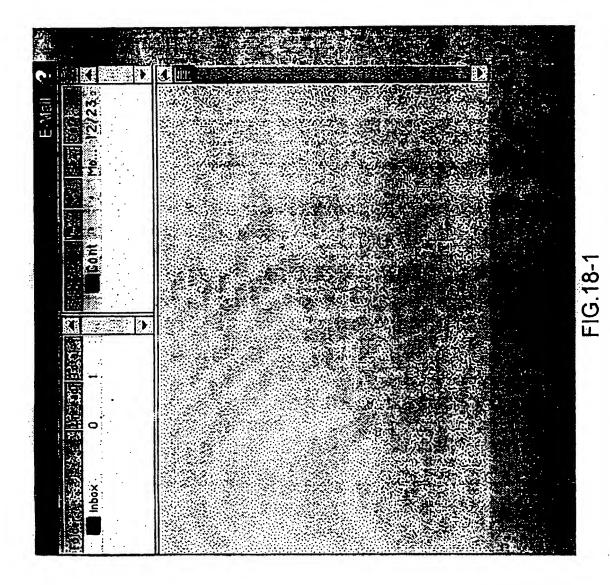


FIG. 16





















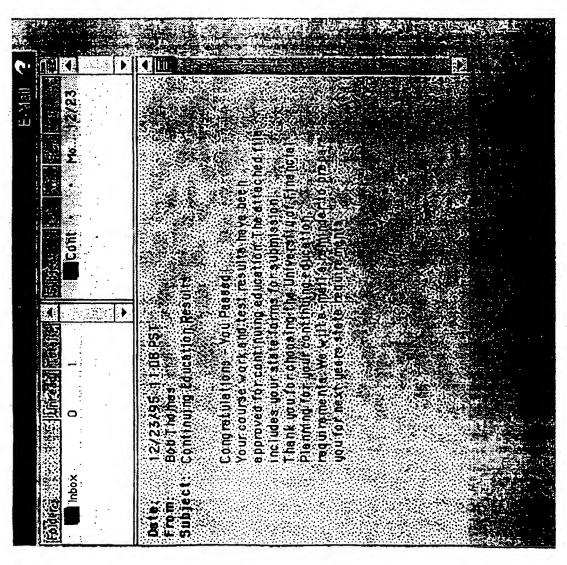


FIG. 18-2

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Ca ordar	¥ 12:41	Thursday, January 4, 1996			Contact Mr. Jones			
	Today	Sat . Thursde	9	13	20	27		
		Fri	ru'	12	19	76		
-	7	Thu	Contact Mr. Jones	1	18	25		
	3661	wed	က	10	21	24	31	
21/21/25/44	-	Tue	7	6	91	23	30	
A TO A CONTRACT SECTION OF THE SECTI	ary	Mon	II.	8	Kar.	22	29	
ar feligion record	January	Sun		2	4	21	28	

FIG. 19

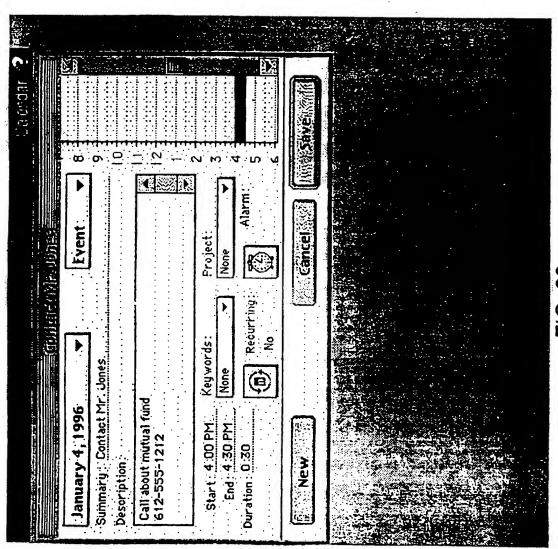


FIG. 20

*8*953

Event	Contact Mr. Jones 4:00 PM - 4:30 PM 30 minutes	None 4 Alarm: 5	SEINHERS DRAW LOSERAR
January 4, 1996 Summary Contact Mr. Jones Description	Call about mutual fund 612-555-1212	Start: 4:00 PM Keywords: End: 4:30 PM None Duration: 0:30	

FIG. 21

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\mathbf{G}) E	
Info	Tom (212) 555-2908 10/21/99 Vahle Matual Euna Jennifer (603) 555-1212 12/3/95 - Vants options for CD	1/2/96 - Bought Munt bonds			Z.	P[Q[R[S[T]U]V[V X Y[Z[AN
	(2/2),555-2998 (605) 555-1212	(310) 555-2345				KLMMO
Last Nam. First Name Phone	Tom: 18 Use	Rip				EFGHIJ
V Last Nam-First.No.	Jones	Taylor				ABCD
7	2.5.4					•

FIG. 22

C. 8 8	II.	22
Phone (212) 555-2938 Phone I (212) 555-2938	\$4 \$4 \$4	
<u>a</u>	Phone (212) 555-2938 Phone 2 Fax Home City State/ZIP Country	Custom 8 Number 1
	rked Stat	
		Info 10/27/95 - Wants Mutual Fund m 2
r. Tom Jones	Salutation Mr. Name Tom Company Title Vork City City Country	Info 10/27 Custom 2

FIG. 23

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F 605-555-1212	o Ms.: Adams (605-555-1212	o Ms. Adams (605-555-1212	υ.	Sall ABC Mutual		High	9	
				AX application to Ms. Adams	*	Hgh	£	
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JG. 24

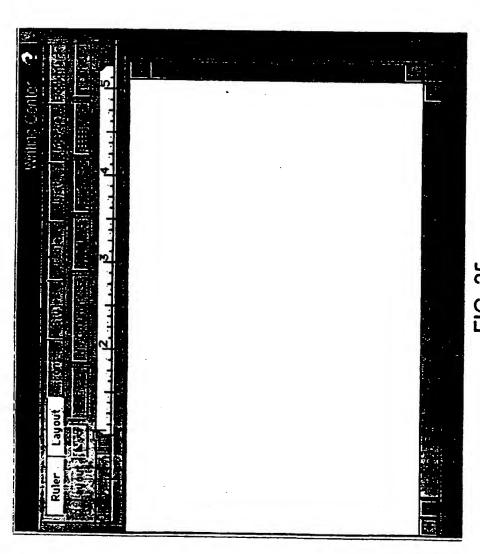
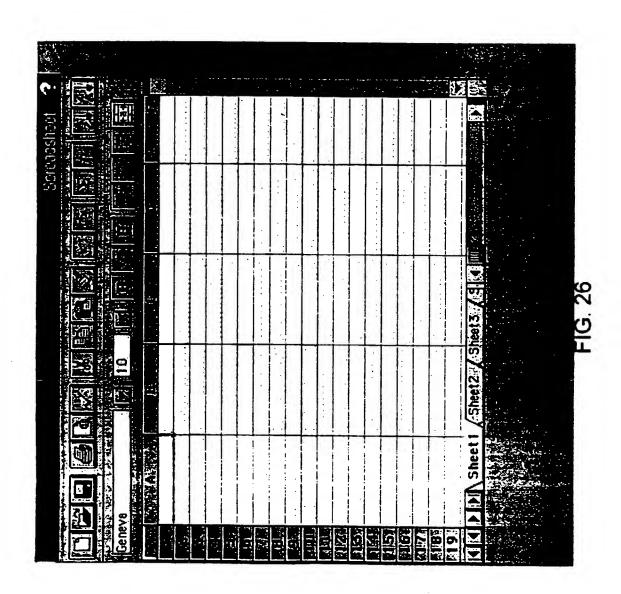
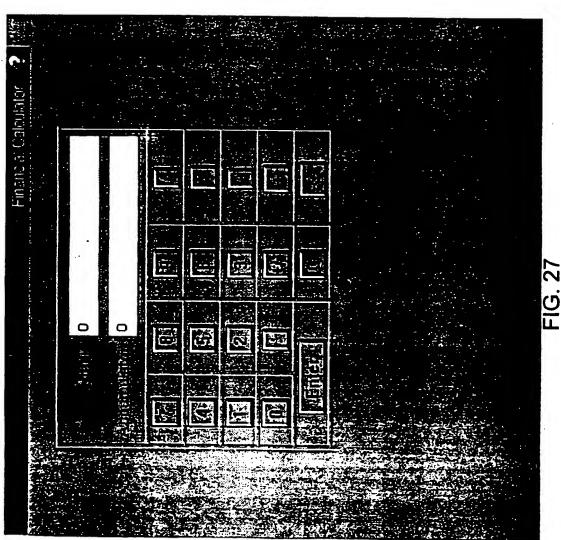


FIG. 23





CUSTOMER INFORMATION: Update and Retreive - Results

CUSTOMER INFORMATION: Update and Retridve

John Doe 12341234

CUSTOMER ACCOUNT

CUSTOMER NAME

DEPOSIT SERVICES

DEPOSIT SERVICES

Checking	Advantage checking	
	Benefit checking	
	other	
	Collegate checking	
	Interest checking	
	Personal checking	24.500
	ers checking	!
Savings	Commercial savings	
	Personal savings	\$28,750
	Sarings - other	

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CMCL - Maney market checking

Maney Market Time Deposits

1 Year over certificate Foced rate IRA

Commercial savings

Advantage checking

Checking Savings FIG. 28-2

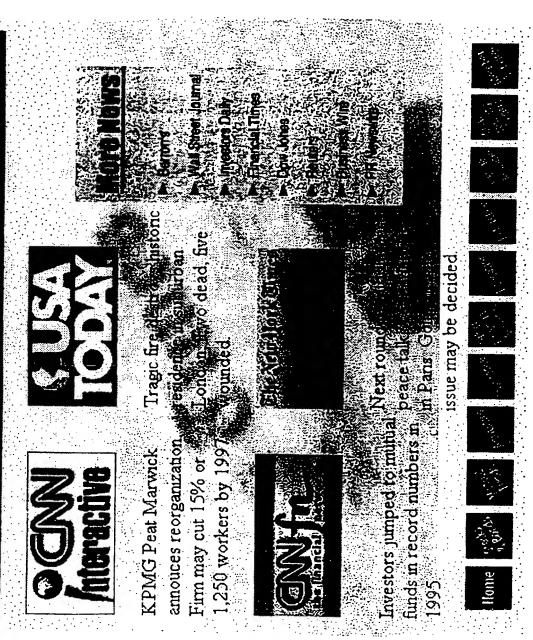
FIG. 28-1

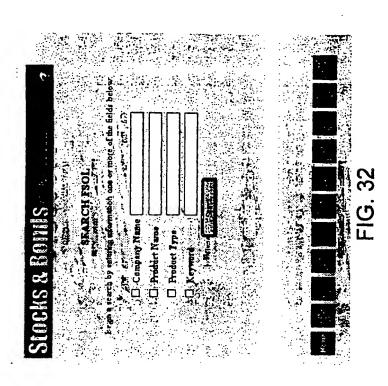
Benkrard - other

Credit Cards

LOAN SERVICES

FIG. 29





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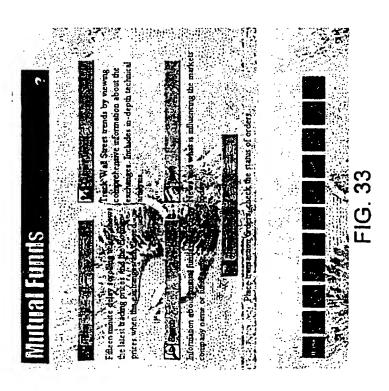
Stock Ticker

Stock prices reflect a fifteen minute delay

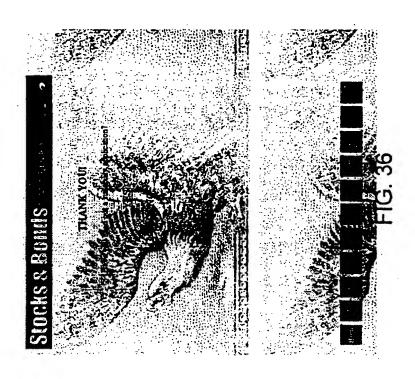
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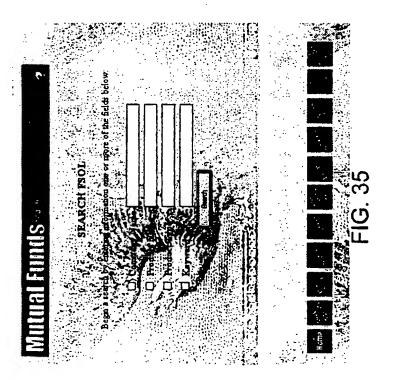
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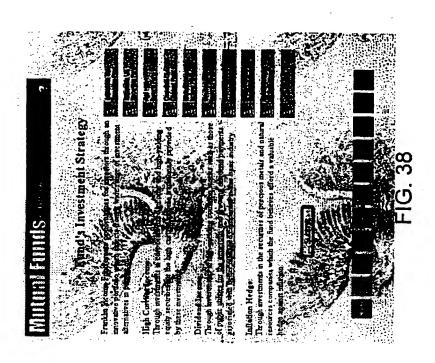


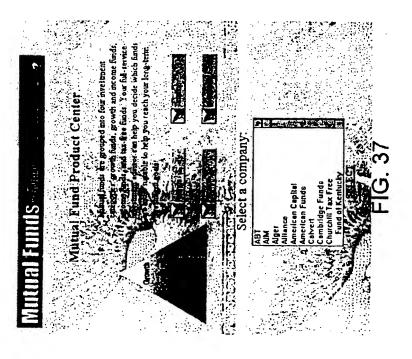












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Agus la Januaria Chipaga lama 7 da Control Con		Description Description of the control of the con	Citizen of
į į		That lane security Other Fee	INITIAL INVESTMENT
INDIVIDUAL OR KONT ACCOUNT			Enclosed is a check payable to the Fund Indicated above fo
Nerve		Social Security Number.	SIGNATURE See 'Japanese Mothe Basemen's Tomare 183 Confinenties
Joint Owner			right to refuse to open on eccount without either e certified of foreign status. Feitus to provide the tax certifications in a common analysis to the extend of the certifications.
GIFT/TRANSFER TO A MINOR	Manne Mane		for not rubies to beckup withholding because I have not betchup withholding to establish to report all nites as that I we no longer endject to beckup withholding. (I yet
			e rentt of efther to report all interest or dividende, please
State of Reachance	Minor's Social Security Number:	Number:	The number shown shows is my consect TIN, or that of (
TRUST, CORPORATION, PARTNERSHIP, OR OTHER ENTITY	RENTITY		to the Fund within 60 days, the Fund is required to commen certified TIN.
Board of Directore Resolution.		Tempoyne ID	Dampi Reciplant, Individuals comot be usergi. Check ess whiches was made as an example section of Annahord
			none and in the second and an area and an area are

TRIST, CORPORATION, PARTNERSHIP, OR OTHER ENTITY

Date of trust document

TempeyeriD

s as I understand that if I do not provide a TIN see 31% bechap withholding until provide a rmpi. Check Dis box only use reading the instructions to it. (To's should rell provide a TM).
FIG. 39-2

 \square Availage TDV.1 are waiting for enumber to be insured to me I understand that if I de not provide a TIN to the Fund within 60 days, the Fund is required to commerce 31% backup outsholding until I provide a certified III. C Exampt Rechibal. Individuals cannot be exempt Chick this bos only after estaing the instructions to see whether you qually set an exempt receipiers (You should still provide a TIM). [] Exempl Forbige Person, Chatk this box only if the following statement applies, "I wan neither a ciden nor a session of the United States, I certify to the best of my broowings and belef, I qualify so an exempt foneign preson unifor entity as described in the matrix tions.

erestit of a fulure to riport all intirest or devidends, piesse cross out the preceding eldament.) The number shown above is my conact TIM, or that of the namor named as section 1.

Permanent address for tax purposes:

CEXTETICATION . Under the penalties of perjucy, the certify that (1) the tath matter provided on this

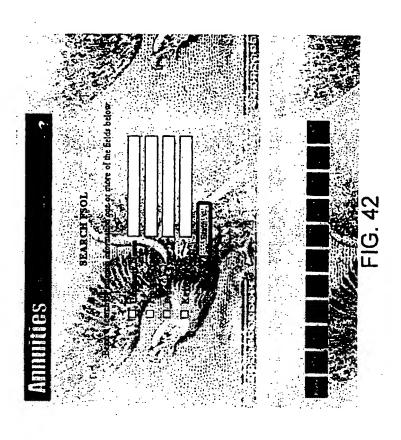
PLEASENOTE. The IRS alows one TIN to be listed on an account On joint accounts, it is preferred that. Us primury account owner (or person listed fast on the account) but his/her number as requested above.

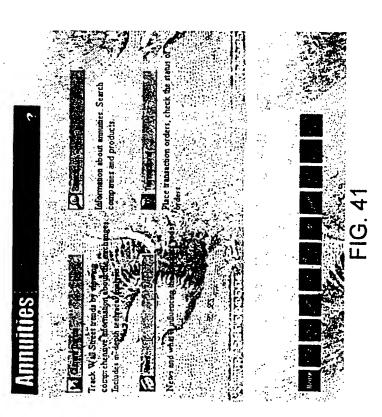
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Signature

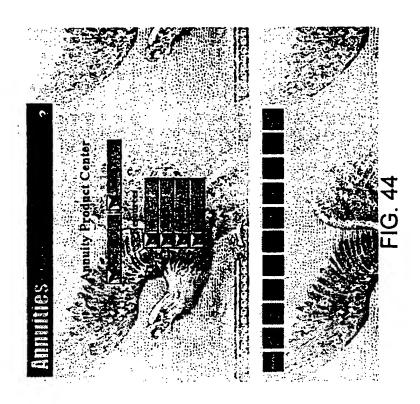
FIG. 39-3





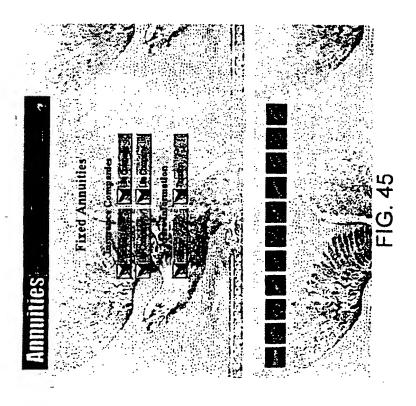


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City	State 2D Relationship [10]	any existing he insurance or amutry? If yes, are detail, hithis company as	ony entiting the naturance or amounty? Were, were details being company name and colicy number		
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Owner's	Owner's Beneficiary	Cig.	State	Date	
		Agent's Signeture	Agend's Social Security No.	Agency Name and No.	
	FIG. 47-1		FIG. 47-2	7-2	
)		

Agent's Social Strengty Ho FIG. 47-2

FIG. 47-3

If yes, give denile, listing	If yes, give $dentalls$, listing company name and policy number.	ry namber.		Springion
				2000
Are you attempting a Section 1035 embangs or a Direct Transfer of IRA Proceeds?	ction 1055 enthengo P.A. Proceeds?	□ Yes □ No		
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Agents Signatura	Agent's Sachat Concept No.		Agrag Has entito.	
		Thom:		
	Ü	FIG. 47-3		FIG. 48

Amuilies

Suitability Application

Risk Tolerance

I. You have just received a windfall of \$50,000. How would you invest it?

I would avert in something that offered a moderate current income and was very safe.

O I would arvest in something that offered a high current income with a moderate amount of

O I would givest in something that offered high total return (current income plus capital appreciation) with a moder act) high amount of nik

Which of the following statements best describes your reaction if the value of your portfolio suddenly declined 15%

I would be very concerned because I cannot accept fluctuations in the value of my portfolio

O If the amount of income I receive was unaffected, it would not bother me

O I averst for long-term growth but would be concerned about even a temporary decline

O I morst for long-term growth and accept temporary fluctuations due to market influences

3. Which of the following investments would you feel most carafortable oming?

The second secon

effe the many results and the first state of the second of the second se

Certificutes of Deposit

O 118 Government Securities of vacomo manistras

3. Which of the following investments would you feel most comfortable owning?

Certificates of Deposit

O US Government Securities of varying maturities

O Blue-chip stocks (domestic and foreign)

O Stocks of new and growing companies

stre bren hand debr berrett made stades to seems

4. Which of the following investments would you least like to own?

Stocks of new, growing companies

O Blue-chip stocks (domestic and foreign)

O US Government securities of varying maturities

O Certificates of Deposit

5. How optomistic are you for the long-term prospects of the aconomy?

● Negative

O Unrure

O Somewhat positive

O Very optimistic

6. Which is more importent to you?

@ The safety of my investment principal

O The amount of income generated by my portfolio

O Increasing my portfolio value and generating income

O Increusing my portfolio value

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- Lower than now

- O Moderately greater than it is today

- A primary concern

O Generaling some current income and increasing my assets over and extended bine frame

O Generating a high amount of current income

O Increasing my assets substantially over and extended time frame

2. Five years from now do you expect your standard of aving to be:

Lower than now

1. Which of the following best describes you investment objectives? Preserving practipal and earning a moderate amount of current accome.

- - O The sums as now
- O Somewhat higher than now
- O Substantially higher than now

3. Five years from now do you expect your portfolis value to be: Portfolio value is not my primary contern; current income is

7. Whick of the following best describes your ettitude about investments outside the United States?

O Increasing my portfolio walve and generating income O The amourt of income generated by my portfolio

O Increasing my portfolio value

The safety of my meastment principal 6. Which is more important to you?

O Overseas markets provide attractive investment opportunites

Investment Objectives

O The US and foreign markets are interdependent

Unsure

O The same or a little more than today

O Subritmitally greater than it is today

4. Is generating current income from your portfolio:

- O Fairly important

 - O Not important

5. Is generating tax exempt income from your portfolio:

- Not importers
- O Fairly important
 - O Very important

mental be name anattalla? d. What do new worst to do ridth tha tansans and

FIG. 49-3

6. What do you want to do with the income generated by your portfolio? 8. Receive all income 9. Receive all income 1. What is your age? 4. 56 and over 1. What is your primary financial goal? 1. What is your primary financial goal? 1. What is your primary financial goal? 2. What is your primary financial goal?	Securities functing O Reviewents planning O Wealth accumulation 3. What is the time frame for you to achieve your financial goals? © 5 - 10 years O 10 years or longer O 10 years or longer Circh here to calculate and adjust the totals.
--	--

FIG. 49-6

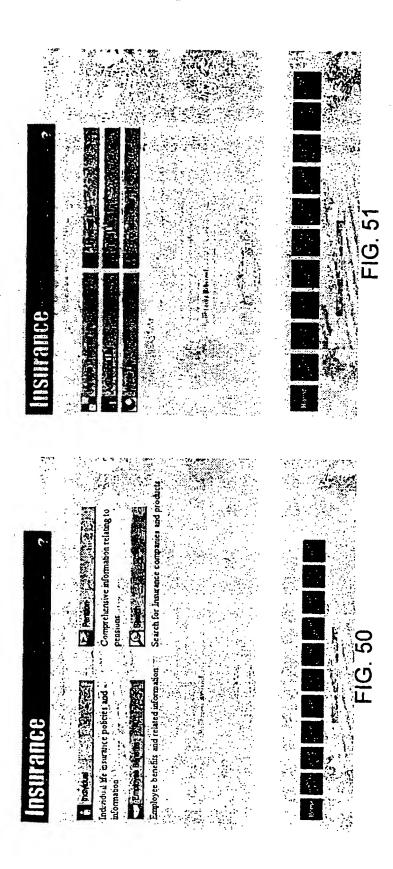
Circk here to nuggest products for the investor, based on the above questions

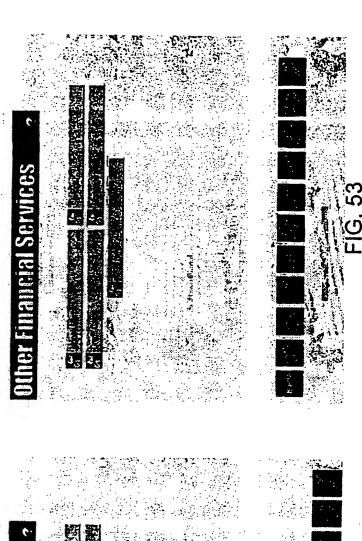
SUGGEST PRODUCTS

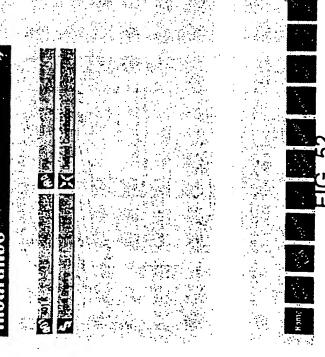
3. What is the time frame for you to achieve your financial goals?

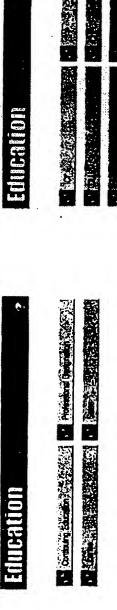
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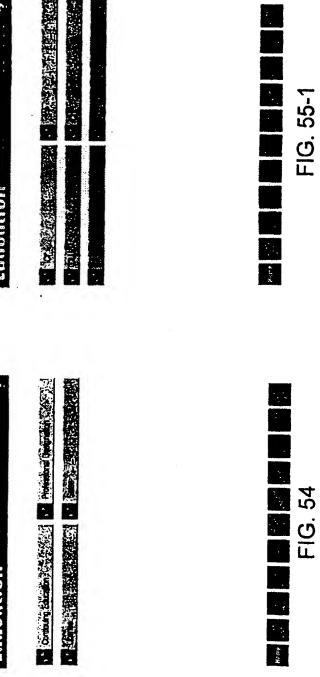
O Retirement planning
O Wealth accumulation

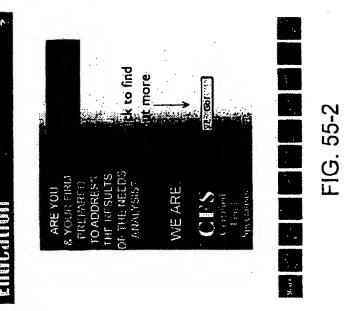


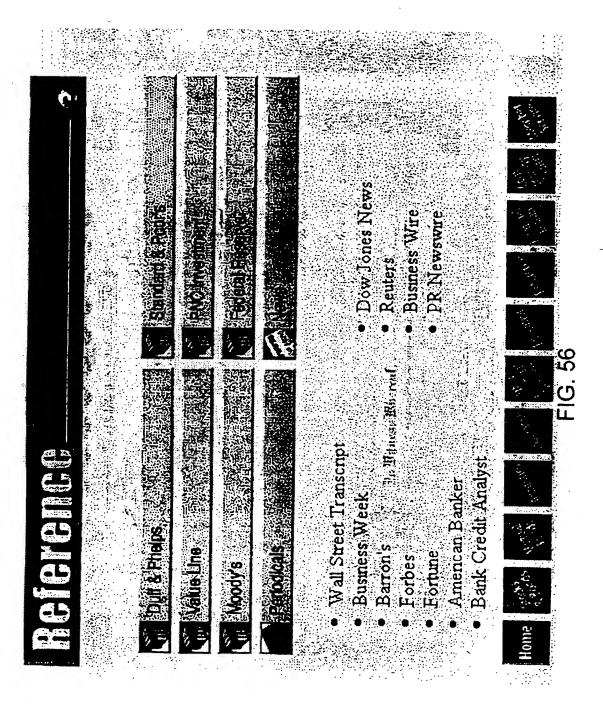












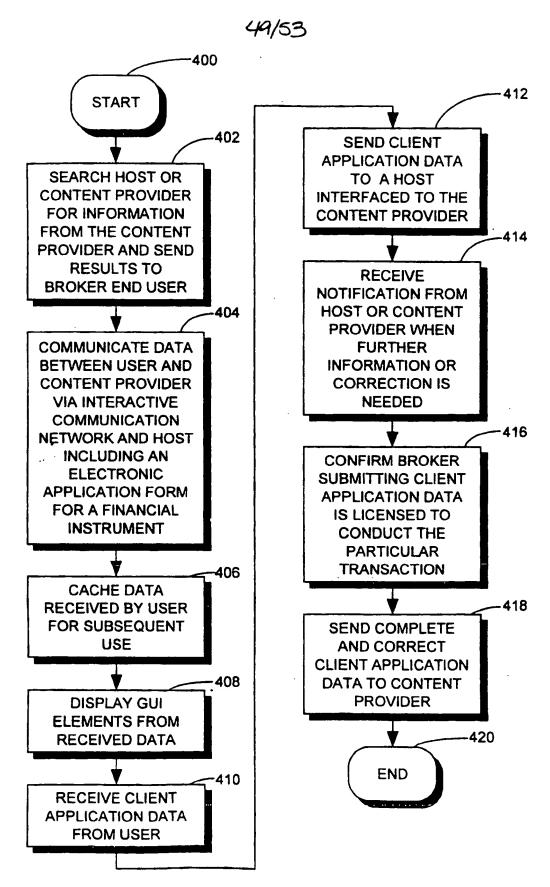


FIG. 57

PCT/US97/04474

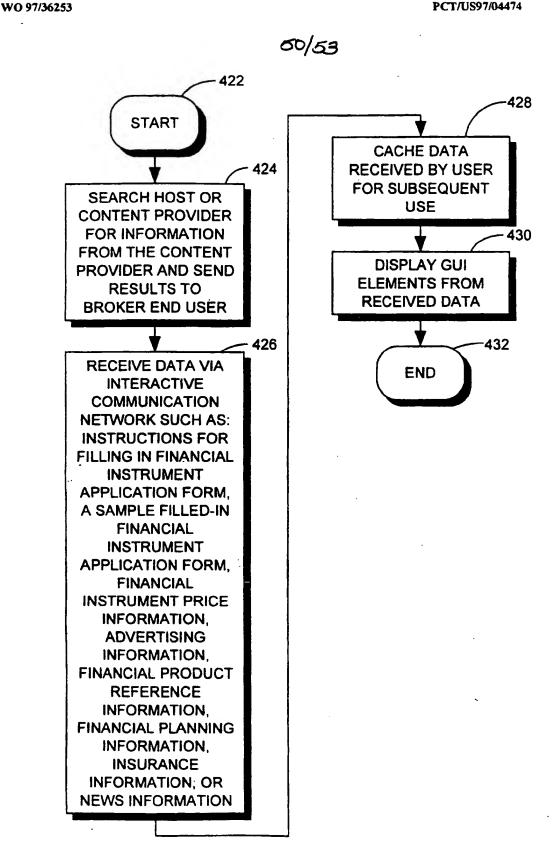


FIG. 58

WO 97/36253 PCT/US97/04474

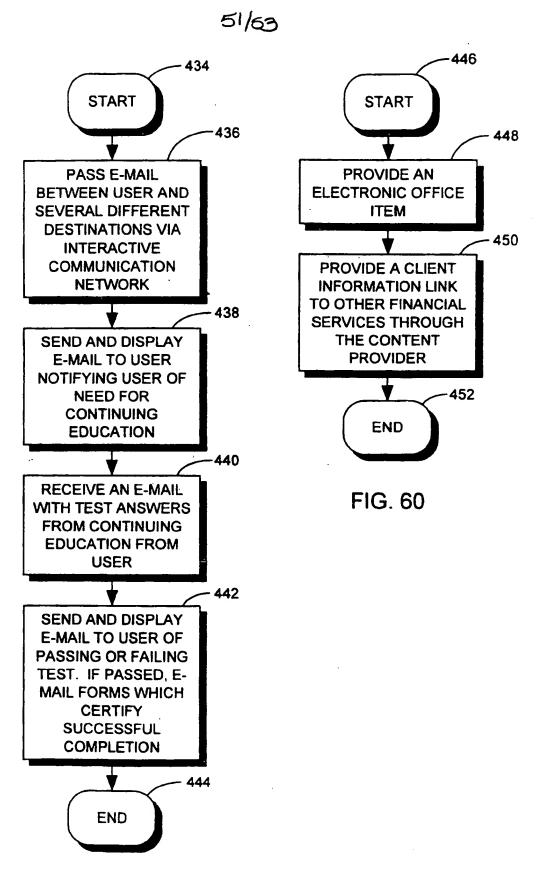


FIG. 59

Income Series Frankin Curtodian Funds, Inc. 777 Meriners Lidand Blvd., PO Box 7777 San Matto, CA 94403-7777 1-800/DIAL BEN The Income Series (the Tead) is a diversified series of Frankin Cuttodine Funds, Inc. (the "Cuttodine Funds), an open end management investment company. The investment objective of the Fund is to maximize income while mantaining prospects for capital appreciation. This Prospectus is mitended to set forth in a clear and concise manner information about the Fund that a prospective invessor should know before investing. After reading the Prospectus, it should be retained for fidure reference; it contains information about the purchase and sale of shares and other tiens which a prospective investor will find useful to have.

time to time, provider a further discussion of certain areas in this Prospectus and other mathers which may be of interest to some investions. It has been filed with the Securites and Exchange Commission (SEC) and is also incorporated therein by reference. Copies of both documents Irionnasbon concerning Custodan Funds, dated Febuary 1, 1994, as may be amended from are avaisble wood chuge from the Fund or the Fund's principal underwrier, Fraving Templeton Distributors, Inc. ("Distributors"), at the address or telephone number This Prospectus pertains only to the Income Series. A separate Prospectus, also dated Februay I, 1994 as may be emended from time to time, describes all five series of this Oussodien Funds and is ancorporated herein by reference. A Statement of Additional



FIG. 63

E-mail: ben@frankin :om

Please select a subject from the popup menu below. Then, press "Go" and you will

be taken to the help guide for that subject

Subject Area:

Owner

8

Welcome to the Annuity Application Guide

FIG. 61

Maar Beneficiaries . Whenever my primmy or coningent beneficiary is a minor, follow the special instructions for minor beneficiaries at the end of this

Beneficiary Quick Reference Guide

- Lengthy designations
- Minor beneficiaries Children of beneficiaries
 - Irrevocable designations
 - Per surpes

Non-survival of beneficiary

applications, change of beneficiary forms and other forms containing beneficiary Below are model beneficiary designations that are acceptable for use on designations.

identifying information ruch as a piecy or contract number, and the signature of the Lengthy Designations - For designations which do not fit available space, write other form, and aattach a separate page with the beneficiary designation, the date, person making the designation. This person's signature must also appear on the "SEE ATTACHED" in the beneficiary designation space on the application or form to which the separate page is attached

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Lrevorable designations - If the entire designation is to be irrevocable, add the following at the end "WITHOUGHT THE NIGHT TO CHANGE." If it is be irrevocable only as to the primary beneficiary, add. "WITHOUT THE RIGHT TO CHANGE AS TO (name of primary beneficiary)." Designations for quadified retrement plans and for the insurance owned by quadified plans examnot be made Children of boneficiaries . When a person's umaned 'childred' are included in a derignation, inducate (a) whether children by legal adoption are included, and (b) whether the designation includes all children of the person, or only children of the person's marriage to a particular spouse. Examples are shown in this guide.

Per stirpes - Ter of the pinase "yer stirpes" is dircouraged, as this term is vol wiversally understood. If childen of a deceased child are to receive their parent's share, wording such as shown in the below example may be used.

erevocable.

at the time the beneficiary designation is made, or to include specific instructions in provinous staing bow a non-turving beneficiary's state (or the entire proceeds Ethere is no turviving beneficiary) will be distributed in the absence of a specific instaction in the beneficiary designation. It is advisable to review ruch provisions Non-survival of beneficiary - Posicies and other contracts usually contain the beneficiary designation.





FIG. 62-2

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US97/04474

A. CLASSIFICATION OF SUBJECT MATTER IPC(6) :G06F 17/60 US CL : 395/204, 201, 346, 962							
US CL: 395/204, 201, 346, 962 According to International Patent Classification (IPC) or to both national classification and IPC							
B. FIEL	DS SEARCHED						
Minimum de	ocumentation searched (classification system follower	d by classification symbols)					
U.S. : 395/204, 201, 346, 617, 962, 963							
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched							
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Dialog, APS							
Dialog, APS							
C. DOC	UMENTS CONSIDERED TO BE RELEVANT						
Category*	Citation of document, with indication, where a	ppropriate, of the relevant passages	Relevant to claim No.				
Y, E	US, 5,613,108 A (MORIKAWA Document) 18 June 1997, Entire	14, 41, 65				
Y, P	US, 5,517,406 A (HARRIS et a Document.	il.) 14 May 1996, Entire	7, 8, 33, 58, 59				
Y	US,5,410,646 A (TONDEVOLD et Document	t al.) 25 April 1995, Entire	1-73				
Y	TUCKER, TRACEY, American Ba December 1994, "Frontiers: Invest Trading on Internet", pages 14+.	tor Services Features Direct					
Y	WALL STREET NETWORK NEWS "Branch Support: Omaha-Based Branches with own WAN", Entire	Kirkpatrick Links Five	1-73				
X Further documents are listed in the continuation of Box C. See patent family annex.							
Special categories of cited documents: "T" later document published after the international filing date or priority.							
'A' 60	cumous defining the general state of the art which is not considered	date and not in conflict with the applica	ation but cited to understand the				
*E' earlier document published on or after the international filing date "X" document of particular relevance; the claimed invention cannot be considered to involve an invention.							
CAL	cument which may throw doubts on priority claim(s) or which is ed to establish the publication date of another citation or other	when the document in taken alone					
special reason (as specified) "O" document of particular relevance; the claimed saven considered to involve as inventive step when the combined with one or more other such documents, and							
P document published prior to the international filing date but later than "&" document member of the same patent family							
Date of the actual completion of the international search Date of mailing of the international search report							
20 JULY 1997 . 1 5 AUG 1997							
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Authorized officer							
Box PCT	ner of Patents and Trademarks	Gail Hayes					
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